REGEN... MAR 5 1883 ...Department of Agriculture

THE AMERICAN FARMER

ESTABLISHED 1819

NINTH SERIES. BALTIMORE, MD., MARCH 1, 1883. VOL. II.—NO. 5.

Farmers' Convention of Baltimore County.

This meeting, held in the Court House at Towsontown, was quite a gratifying success. It was estimated that about two hundred persons were present, including many of the most intelligent and progressive farmers of the county, and some from a distance.

The meeting was organized by the selection of officers as follows: President, Col. Walter S. Franklin; Vice-Presidents, Samuel M. Price, Frank Scott, R. P. Choate, Col. E. P. Philpot, Eugene Blackford, S. Merryman Anderson, Dr. Walter T. Allender, Luther Timanus, Rev. Jacob Shamburger, R. A. Vincent, Jr., Nimrod Gosnell, Jacob Shunk, Joseph A. Brian; Secretaries, Wm. Fell Johnson and Wm. B. Sands.

Col. Franklin said that Col. Wm. Allan, who was expected to preside, was absent because of sickness. He opened the proceedings by introducing Mr. C. Hallowell, of Montgomery county, who made an address on the "Advantages and results of local farmers' conventions." Mr. Hallowell said Montgomery county, as he knew it in the early days, was the synonym of poverty and desolation. Land was of no value then, and our roads could be run at pleasure. Sand and sedge and pine barrens were everywhere. My venerable father used to say that we were free of tramps because such people had not courage to venture among us. In 1845, on a farm of 200 acres, our hay crop was 16 tons, last year 75; wheat 41 bushels, last year 1,000; corn 70, last year 1,400 bushels. He illustrated by statistics to show the almost wonderful improvement in Montgomery agriculture since those early days. In 1844 my father organized a farmers' club with 12 members. Last year my own farm produced as much as the aggregated crops of the 12 farmers in 1844. Last year in our district 60 new dwellings and many new barns were built. Land that at one time sold at $3 05 an acre; if now in the market would bring $80. I attribute a large part of this improvement to co-operation among our farmers, bound together by the ties of interest and sympathy through the farmers' clubs, of which we have four, and a fifth about to start. Our county associations hold annual conventions, which are informal gatherings and very interesting. By co-operating we get acquainted with each other, secure the settlement of questions with corporations, the Legislature, etc. Farmers are by their calling isolated, and statistics show that the largest percentage of insanity is among the agricultural classes. They do not have in many instances the association with their fellows which human laws enjoin. Agricultural clubs serve to relieve this monotony in farmers' lives. Mr. Hallowell's address was listened to with deep interest.

Dr. M. G. Ellzey, late professor of practical and scientific agriculture in the Agricultural College of Virginia, made an address on the "Digestion of Animals," which is given elsewhere. He illustrated some of the chemical changes in the process of digestion by experiments, showing the reactions, and by the practical application of his suggestions made a most favorable impression upon his audience.

A discussion ensued on the question of feeding cattle in which Mr. Arthur Chenowith, who is feeding 170 cattle this winter, Mr. Charles T. Cockey, Mr. Wm. Munnikhuysen, of Harford, Mr. Asa Stabler, of Montgomery, and others took part.

Mr. C. Lyon Rogers offered resolutions urging the establishment and permanent endowment of an experimental station in Maryland by the Legislature, with a committee to further the object, to be named hereafter. Dr. G. M. Bosley seconded the resolutions, and favored Pikesville arsenal, Baltimore county, owned by the State, as a proper site. Mr. Thomas B. Todd offered a resolution to the same effect, and said the arsenal property would be of more use to farmers than it would be if given for private purposes, or to some charitable institution of doubtful utility. The resolutions which were adopted are given below.

Mr. W. F. Massey, of Baltimore county, read a paper on "Farm Gardening, or Vegetable Crops in Farm Rotation and Farm Training."

Mr. Francis Sanderson, of Baltimore county, read a paper on "The Application of Manure." Both of these papers will be found below.

A discussion on ensilage brought out statements from Mr. C. Lyon Rogers, Mr. Thos. B. Todd, and others that it is a success in Baltimore county.

After informal conversation on different topics, it was resolved, on motion of Mr. Joshua Parsons, that the meeting had been of much interest throughout to those participating, and that it adjourn to February 22, 1884. A vote of thanks was given to the gentlemen who made the several addresses.

THE RESOLUTIONS.

Resolved, I. That this convention, representing the farmers of Baltimore county, is earnestly impressed with the fact that a properly equipped Agricultural Experiment Station, under competent direction, is for the State of Maryland a great and urgent necessity. In furtherance of this view of the matter, attention is invited to the valuable results obtained at small cost by such stations in New York, New Jersey, North Carolina, Connecticut and other States, and especially in France and Germany—results of the utmost value to science, but more especially of practical utility in the midst of the soils, climate, methods, and general surroundings of the localities in which the several stations are placed.

Resolved, II. That there are many questions of fundamental and paramount importance in practical agriculture, which cannot be solved for Maryland farmers outside of the State of Maryland, and which cannot be solved by private individual effort, and the solution of which ought therefore to be undertaken at public expense.

Resolved, III. That a standing committee of five be appointed to present this matter to intelligent agriculturists and men of science, and especially to the various agricultural organizations throughout the State, and to solicit their active co-operation in a combined effort to secure the early establishment of such an Experiment Station. And that this committee be charged to co-operate with similar committees, which may be appointed by other agricultural societies or organizations, and with men of science and farmers generally, in collecting and arranging in compact form all useful data, throwing light upon the value of such a station to the whole State, and to the people of every calling and pursuit, and that they be requested to present the same to the Legislature at its next session, and urge the establishment and permanent endowment of a well equipped Agricultural Experiment Station for the State of Maryland.

Whereas, A valuable property, conveniently located, and which may be converted at small expense to the purposes of an Experiment Station, is already owned by the State of Maryland—namely the Arsenal at Pikesville, donated to the State by the United States Government,

Resolved, That this Convention considers this property an eligible and appropriate site for an institution of this kind, and that its conversion to such a purpose would be more desirable and useful to the people, and to the farming and industrial interests generally of the State, than to have it dedicated to private or even to charitable uses of doubtful expediency.

Resolved, That the committee appointed by the Convention be requested to press the desirability of this use of the Arsenal upon the Legislature.

Mr. S. K. Crosby presented a paper in which he suggested instead of an experimental station, a model Maryland farm. It should be of convenient, substantial arrangement, with all the necessary attractions of a good, modest home, and should grow crops and stock in the most scientific manner, that will pay rent and all expenses of the farm and farmer and have a surplus. He thought the Agricultural College farm in Prince George's county, belonging to the State, could be rented low for the purpose. Laid on the table.

The Digestion of Animals.

AN ADDRESS BY DR. G. M. ELLZEY.

This essay proposes a brief study of mammalian digestion. It is necessary first to examine the nature of alimentary materials. Nutritive matter is of three sorts, viz: That which contains nitrogen as a constituent part, such substances, of which albumen is the type, being variously styled proteids, albuminoids and nitrogenous matters; that which consists of carbon combined with hydrogen and oxygen in the proportion in which they unite to form water, as starch, sugar, gum, called carb-hydrates; and, lastly, fat, &c., composed of carbon and the elements of water, but not in the proportion in which they form water; these are commonly called hydro-carbons. The ash minerals of plants, found also in the bodies of animals invariably, are essential to the nutritive processes; nevertheless, living animal tissue is not nourished by any sort of mineral matter. Of course the bones of the skeleton are formed of the minerals of the food and drink.

The process of digestion has for its object the separation of the nutritive matters from the crude, insoluble parts of the food and their introduction into the blood in proper form for assimilation by the various organs and tissues of the living organism. The process begins in the mastication in the mouth and is completed by the mingling of the dissolved nutritive subetances with the current of the circulation in the right chambers of the heart. But it is not simply the mastication which is effected in the mouth; equally important is the insalivation effected while the chewing is going on.

The saliva contains a peculiar ferment called the diastase, which speedily converts starch into sugar. The sugar so formed being dissolved as swallowed, is rapidly absorbed from the stomach into the portal veins. Starch, however, is not so dissolved, and cannot be absorbed. Arrived at the stomach, the diastase is at once neutralized by the gastric acid, for it is only operative in an alkaline or very feebly acid medium. The digestion of starch is therefore completely arrested in the stomach, and that portion of it not converted into sugar in the act of chewing and swallowing has to be passed on into the intestines. When in the presence of the alkaline mixture of bile and pancreatic juice the diastase furnished by the pancreas completes the conversion of the starch into sugar, and it is then and there absorbed into the vessels tributary to the portal system.

In the stomach we meet with pepsin, the ferment of which effects the solution of the albuminoids. Pepsin is operative only in an acid medium, and hence the presence in the stomach of free acid. The fats are in no wise affected either by the diastase or by the gastric acid or pepsin. They pass unaltered into the intestine. The food, as it passes the pylorus or outlet of the stomach, consists of the starch unacted upon by salivary diastase; the fats of the food, as swallowed, and an undissolved or undigested portion of the albuminoids, mingled with the gastric acid and pepsin. But an alkaline medium is now met with, the gastric acid is neutralized, the action of the pepsin killed, pancreatic diastase at once attacks the residuary starch, the fats begin to be emulsified by the alkaline fluids, and are rapidly taken up by the lacteal vessels, and the undigested portion of the albuminoids is dissolved under the action of trypsin, the pancreative ferment, capable of effecting their own solution in an alkaline medium; they pass rapidly into the blood vessels, and the crude, insoluble portions of the food are swept on into the large intestine, whence they are voided as dung. Such is a bird's eye view of the digestion of the mammalia in general.

It is by some supposed that the digestion of ruminating animals is very different in its nature from that of other mammalia; but, in fact, it differs in no essential respect. The whole ruminating apparatus is simply tributary to the act of insalivation, and the action of diastase upon the starch, which comprises so large a proportion of their food If an animal so bulky and inactive as the ox had to bite a mouthful of grass and then chew and properly insalivate that before swallowing it and getting a new mouthful, it would have to graze day and night in order to keep alive. It therefore gathers and swallows without chewing or insalivation as much food as the paunch will hold, and then lies down at ease to masticate and insalivate

at its leisure. The ruminating apparatus is not, however, able to return ground food, such as meal or bran, and when this is bolted into the paunch, or directly through the manifold bags into the stomach, in either case it arrives in the stomach without any action on the starch, or very little at most. The whole diastastic digestion is thus thrown upon the pancreas. Furthermore, the presence in the stomach of the whole starchy matters of the ground feed, viscid as they are, tend to ball the whole contents of the organ into an impenetrable mass, which presents only its outside to the action of pepsin and the gastric acid. It is apparent that under such circumstances the food will pass the pylorus not only but slightly digested, but in the worst possible condition to be acted on effectively by the biliary and pancreatic fluids and their ferments. In this way lumps of meal fed to steers often pass through all the fluids and ferments of the digestive canal wholly undigested and almost dry. Such lumps of meal are always to be seen in the excrement of meal-fed steers merely stained externally by bile and mucus. It is supposed by most persons that this trouble is effectually overcome by mixing the meal well with cut fodder of some sort and wetting the fodder to cause the meal to adhere to it, and be brought up for remastication with the "cud." Some benefit is certainly derived from this practice, but in point of fact in the honeycomb cavity and the end of the paunch where the "cud" is gathered by the reversion of the action of the œsophagal muscles the meal is very effectually washed off the fodder and passes on into the stomach ahead of the rechewed fodder, which is detained and separated from the meal to a further extent between the leaves of the manifold bag. However, the presence of some fodder in the stomach along with the meal prevents it balling in the stomach to a considerable extent, and so far promotes the stomachic digestion of the albuminoids of the meal; but feeding fodder with the meal does not secure its remastication as a part of the cud, or its proper insalivation, so that nearly the whole diastastic digestion of ground food is in a ruminating animal thrown upon the pancreatic diastase.

In the case of corn meal these difficulties are peculiarly effective in the prevention of its proper digestion when fed alone, seeing how great is its proportion of starch. Cotton seed meal, with its very large contents of albuminoids and fat, fares much better in the digestive apparatus of the ruminant; so, too, does bran for a similar reason. The benefit of grinding the cob with the corn when fed to cattle is largely explained by the coarse silicious husks preventing the balling of the meal and securing a more perfect action upon it of the various digestive solvents and ferments to which it is presented successively in its passage through the alimentary track.

The facts stated also throw light upon the observed fact that whole corn is better digested than corn meal by cattle, a large proportion of the grain being returned with the cud and rechewed and well insalivated and sent into the manifold bag on its way to the true stomach, thoroughly well incorporated with the fodder which forms the mass of the cud, whereas the grains that escape remastication and pass directly on to the stomach pass from the bowel entirely unacted on further than to be softened by the warm fluids they have passed through. So they may be recovered by swine, and there will be a minimum of loss.

From this point of view we see why practical feeders like Colonel Beverley, of Virginia, tell us that they get better results from feeding cotton seed meal, except that the excess of oil and albuminoids purges the cattle. There can be no doubt whatever that the best results can be had by feeding mixtures of cotton seed, corn meal and bran. It is wasteful to feed cotton seed meal alone, because the excessive contents of oil and albuminoids can only be partially digested, and furthermore, great care is necessary to prevent the animals having an attack of acute indigestion and being so thrown off their feed, which will, as all feeders know, result in loss not inconsiderable. When one animal leaving his feed, another gets it as well as his own, and so the whole herd may be gorged, one at a time, and thrown off their feed in a few days. It is wasteful to feed corn meal, because its excess of starch interferes, as described, with its digestion. It is less wasteful to feed bran, as its chemical and physical qualities adapt it better to ruminant digestion than either of the other foods named. It cannot be doubted that a mixture of all three would be the best and most economical way to feed these great meat and manure-producing feeding stuffs. In what precise proportion needs to be determined by experiment. There is a great want in this country of a proper provision for making and recording exact experiments for the purpose of settling upon a definite basis, matters of prime importance to the great fundamental industry of the people. A proper experiment station in each State could do a work of immense value if placed under competent supervision, projected on a practical plan, and worked in the interests of agriculture. But if, in order to obtain funds to pay certain men, they are to be worked in such a way as to play upon the ignorance and prejudice of the public, they had better not have any existence.

The idea that a State Department of Agriculture or a State Experiment Station is a place for the control of the sale of commercial fertilizers by analysis is visionary and absurd. The astute sharper of the fertilizer trade does not fail to palm off by means of analysis, damaged or originally worthless material as in all respects first-class; whereas, the honest dealer simply charges the tax and trouble and time lost to his customers, and goes on producing the same material as before, only at a higher price. Conducted on the plan of a detective police agency the station is a stupendous failure.

If in the State of Maryland you had a proper Agricultural Experiment Station, properly equipped and under the direction of a competent man, himself thoroughly conversant with the methods of modern science, no doubt it would prove possible to secure the cordial co-operation and friendly countenance of the Johns Hopkins University in a public work so closely parallel to its own, as well as of the National Department at Washington. But the administration would have to be competent and *bona fide* agricultural, or dismal failure would be a foregone conclusion.

At such a station we might have the digestive questions I have been discussing settled, and farmers could know the best way to combine and feed their various food supplies, and what to purchase to supplement the home supply. The German stations have done much in this direction, but their work is so technical and their results are so voluminous, and often conflicting, their soils, climates, animals, feeding stuffs and methods of feeding are so widely different from ours, that all their results will have to be verified under the different conditions prevailing in American agriculture before they can be safely adopted; nor are they at this time reducible to a form available for the guidance of the average farmer. Further, we need to know what kind of animals can most profitably convert a given food supply into butchers' meat and other condensed animal products for market, and manure for the land which produces the food. There are questions in breeding, selecting, rearing, feeding at different ages, purchasing, selling, working domestic animals of all kinds to the best advantage, for the solution of which the stations ought to furnish the data. The cost of the maintenance of such a station ought to be a mere trifle compared with the great benefits it ought to confer upon the community. It must needs have a farm attached. A good laboratory would be necessary, but it need not be by any means extravagantly costly. A laboratory, where much work is done, is not apt to be showy or costly, but one gotten up for purposes of display is certainly a prodigiously expensive fancy.

A perfectly skilled, sensible, hard-working, practical chemist would be necessary. The director could do everything else with only moderately skilled labor. At such a station might with every propriety be undertaken a general physical survey of the State for the purpose of collecting data and material illustrative of the various soils, crops and methods of culture pursued in the different sections of the State, as well as of the live stock industries, the geology, the mineralogy, the botany and zoology of the State. The failure of so many expectations which have centred around the American stations and colleges have been largely due to the fact that it has not been recognized that gentlemen of merely literary culture or of professional or political distinction cannot by any possibility be fit to undertake the direction of such work, for the simple and all-sufficient reason that they know nothing at all whatever about it. Such a work requires a man of special training, and lacking such special training no natural abilities, no general culture, no knowledge even of pure science, will enable any man to succeed in such a position. Classical learning absolutely unfits a man for such work, because real classical attainments will monopolize any man's talents, to the exclusion of other acquirements. If these simple truths could once get possession of the public mind there would be no difficulty in obtaining men properly trained to take charge of the direction of the much-needed educational work I have been endeavoring to present to this intelligent audience in a favorable light. If anything I am able to do or say may promote, in the smallest degree, the establishment and successful working of an experiment station in this State, the people of Maryland will have reason to be grateful to me for all time.

Farm Gardening and Farm Training

A paper by W. F. Massey.

In the "good old times," when Baltimore was a smaller city and her grain trade reached her on the one hand by the bay schooners and on the other by wagon teams, when Marylanders looked with supreme contempt on flour made north of their borders, and could not be made to believe that any wheat was fit for family flour but the old white wheat of Maryland, Virginia and North Carolina—in the days when farmers ran their accounts with commission men and store-keepers from Christmas to Christmas and were never expected to settle bills until their wheat was sold—when the vegetables needed in Baltimore were supplied from a few gardens in the suburbs, and none were brought here from the South or sent hence northward—when the soil was newer and phosphate bills unknown, there was little stimulus to draw the farmers out of the ordinary routine of corn and wheat and the easy going habits of their ancestors. Their wheat paid their bills and gave them some cash, and if the corn made meal and pork for the servants, with hams for family use and fodder for the stock, it was almost as much as was expected of a Maryland farm in the grain growing counties. Some of us even now at times look back with a sigh near akin to regret to the days of the old blue-stem wheat, the jolly corn huskings, and the field hands' evening songs. Amid the heterogenous population which now crowds the country in the vicinity of the city, corn huskings and all the old farm frolics are unknown; the hard necessity of earning a living has hushed the darkey's twilight song, and the old blue stem wheat long ago refused to produce a crop. The failure of the old white wheat was the first serious blow to the old system of farming, at least in the Eastern Shore counties. Then came the war and the change in our labor system, with the contraction in credits, rendering the dependence on an annual crop for funds rather inconvenient. Then the wonderful extension of the westward lines of railroads, and their competition in making cheap freights for western grain; the opening up of new fields for growing winter wheat, and finally the new process of milling, by which the finest flour is made from the hard skinned spring wheat of the northwest, upon which we formerly looked with contempt, made it absolutely necessary for Maryland farmers to pursue a more diversified culture and to *farm better*. For I am not one of those to believe that grain growing can no longer be made profitable by reason of western competition, because I know hundreds of farmers who *are* making money in growing grain in the face of western competition. The farmer whose farming succeeds in producing 25 to 40 bushels of wheat per acre, and 10 to 12 barrels of corn, has no reason to fear western competition, while he whose wheat crops only average 10 bushels per acre, will find little or no profit at present prices. Western competition has been a blessing, inasmuch as it has *compelled* better farming. The growth of our seaboard cities and their constantly increasing demands for food have led to an increasing interest in the growth of garden vegetables, and hundreds of farmers, especially on the Eastern Shore, after reading some such book as Peter Henderson's "Gardening for Profit," (a first-class work, by-the-bye, and by a wonderful man) and seeing therein accounts of profits of $200 to $1000 per acre, from vegetable growing, by skillful men, rushed headlong into "*trucking*" as a business, only to find after a year or two that they had gained experience and lost money, and to learn that any business to be successful must have as its head a man who has been trained to it.

But, throughout our State, time and experience are adjusting the various kinds of culture to the conditions suiting them. In the southern counties of the Eastern Shore the adaptation of soil and climate have made the cultivation of early peas and strawberries equally profitable with the sweet potatoes and melons, for which they have already been famous. In the upper counties of the Eastern Shore the culture of fruit has occupied the spare time and land of the farmers, and their great success has attested the wisdom of the culture. But even in that greatest of peach growing counties, Kent, there are still farmers who are too wise to devote their whole attention to fruit, and who by the judicious diversity of their crops, are independent of the disasters which sometimes come upon the neighbors, who, to use a homely adage, "have all their eggs in one basket." The object of this paper is not to enter into a dissertation on the methods of cultivating garden vegetables in general, for the time allotted me is far too brief for this, but to indicate in a general way those few vegetable crops which can be grown on an ordinary improving farm without seriously interfering with the regular work of a farm on which the cultivation of grain is a leading feature. That is, what vegetables can be grown upon a grain farm without involving the necessity of hurried marketing from day to day, that belongs rather to the crops of the market gardener proper. These are few in number, and I divide them into two classes.

1st. Canning Crops—that is, crops which are grown for preservation in hermetically sealed cans for future consumption and sale. These are either canned on the farm, thus adding the manufacturer's profit to that of

the grower, or they are grown on contract for delivery to a neighboring packer. The leading crops of this sort are tomatoes, sweet corn and peas. The field culture of these is familiar to most of you, and as their culture will always be a local industry, I mention them mainly to call attention to a danger in their cultivation on a grain farm. Already men of experience in Harford county, where the cultivation of canning crops is most extensive, are beginning to speak of them as exhaustive. When these crops are grown for canning they should be confined to their place in the regular rotation of crops and not allowed to occupy the place which tobacco has taken in some parts of the country, starving all other crops for its growth and perfection. I cannot think that tomatoes and peas can be exhaustive in an ordinary rotation of crops, except that in some hilly neighborhoods, where the soil is inclined to wash, the addition of another hoed crop, thus keeping the land longer without sod, may be a disadvantage. Putting a whole field in vegetables as part of a regular system of crop rotation with grass and grain, would necessitate, with many farmers, a division into smaller fields and a longer rotation, and therefore more grass, which will be an advantage in more ways than one.

2d. Those vegetable crops which can be sold at maturity and in large bulk at one time. First among these I name one which every farmer grows and one which all of us think we know all about growing—the Irish potato. Of course, every farmer grows potatoes, but few seem to think that their more extended culture as a regular crop with wheat and corn could be profitable here in Baltimore county, simply because they have never been led to contemplate them except as a minor crop, and therefore are comparatively ignorant of the many labor-saving machines for planting, cultivating and harvesting which the large potato growers of the North and West use. The wonderful increase in the cultivation of the potato as a field crop in some parts of the West has lately been the subject of comment in the public journals. The crops from the growers are daily landed from the cars and sold at profit to the growers, in Baltimore, under our very noses, but a thousand or more miles from the growers. If the western and northern growers can continue and annually increase their cultivation for our market, surely here in the neighborhood they could be made a profitable farm crop, even admitting that they are a more certain crop north of our latitude. In the farm rotation, the place for potatoes I think would be on a sod, and to be followed by wheat. The best crop of potatoes I ever grew was on, or rather under, an old blue grass sod. The sod was turned with an old Pratt & Davis plow and the potatoes dropped in every third furrow as the plowing proceeded. The subsequent cultivation was with harrow and cultivator, perfectly flat. This experiment and subsequent experience have led me to favor deep planting and flat culture for potatoes. Some people make a great *bugbear* of the Colorado Beetle, but the destruction of this insect is such an easy and simple matter that the loss of a crop by the bugs can only be the result of ignorance or laziness. Various methods have been recommended for the application of Paris Green to the destruction of these pests. The plan I have settled upon as the cheapest and most simple is to mix the poison with the fine limestone dust from our turnpikes, in the proportion of about one part of Green to fifty or more parts of the dust. A careful man, with mouth and nostrils muffled, scatters the mixture by hand over the vines when the dew is on. If the application is made just when the eggs are all hatched out, one application will suffice usually. The turnpike dust I gather and store in barrels every summer, and find plenty of other uses for it, as an absorbent of bad oders from any cause whatever.

Another crop, and one not usually grown, has in my experience been the most profitable vegetable within the reach of the farmer, but which, of course, cannot usually be grown so largely as the potato. I refer to that variety of the onion known as the Potato Onion, or Multiplier. Said an old farmer to whom I once recommended the culture of this onion, "they are of no account." Why so, said I? "Because they won't keep." True, said I, but I always grew them to sell and never tried to keep any but the sets, and not even these if I could possibly plant them in autumn. The advantages of this onion for growing on a grain farm are—1st, they grow well on thinner soils than other sorts; 2d, they can be planted in fall after pressing work is over; 3d, they like the loose earth drawn around the stems, and therefore can be cultivated almost entirely by horse power. Their cultivation is over before harvest, and they are ripe and ready for market soon after the wheat crop is secured and when our market is more bare of ripe onions than at any other time. I suppose good onions can now be bought in Baltimore at from $1.50 to $2.00 per barrel, while last July I saw potato onions sell for $8.00 per barrel. When I grew them for market I never sold them in July for less than $7.00 and have known them to bring $9.00 per barrel. When the onions are harvested, if manure and labor are plenty, a crop of cucumbers for the pickle factory can be grown on the same land. This is a much more exacting crop, in gathering time, than the grain farmer can usually find time to manage, and its place can well be taken by a forage crop.

Another crop which can be profitably grown is the Lima bean, to be ripened and sold at leisure in winter. Most growers agree that the profit of Lima beans sold in a dry state is usually as large as though sold green. Some years ago a market dealer in Baltimore offered to contract with me, for a series of years, for ripe Limas at $5.00 per bushel. At this price my experience proves that an average of $150 worth can be grown on an acre of fair land. If cedar poles are used they will last many years, if cared for, and aside from the poles the expense of culture need not be much more than that of Indian corn. The crops of onions and Lima beans are less exhaustive of the mineral constituents of the soil than any with which I am acquainted, and with proper fertilizing they can be grown to advantage on the same spot for an indefinite number of years. In fact, the best crops of onions are not obtained until the land has been cultivated in this crop for several years. The space allotted to this paper is almost consumed, and I have only given hints and suggestions, but individual circumstances and locations will readily point out to the observant farmer other crops with which he can further diversify the cultivation of his acres; for be assured that while the cultivation of specialties may pay in some cases and certain localities, the true *farm-gardening* or *garden-like farming*, which I consider the highest form of soil culture, is that which comprises the greatest variety of crops; where the cereals are made to produce their maximum crops, and the luxuriant pastures feed annually-increasing flocks and herds; where the rough products of the soil are sold only in the shape of beef, lambs, milk, butter, &c.; where the vegetables are the best of their kind, and grown in perfection; where all the fruits of the climate, and of the choicest sorts, are grown in their due proportion, and put into market in an honest and attractive shape; where the poultry yard is a recognized source of income, and is cared for accordingly; where the constantly-improving soil is never left bare long enough to grow foul weeds; where the farmer's name is a guarantee of the quality of every product sold under it, to such an extent as to give it an extra value in the market; where the early and late maturing crops, the flocks and herds, keep the pocket replenished, so that store bills can be avoided, and labor promptly paid; and where, as their highest aim, all these things are made to blend together, toward the making of a happy home, and the training of noble men and lovely and accomplished women, to extend and adorn the ever-increasing circle of Farm Gardens. This diversified culture, in which the brain of the master is the central force, calls for *educated* farmers. A truly educated farmer is, to my mind, the type of what true education should be—the development and training of every faculty of mind and body into a symmetrical and harmonious whole. A man conversant with the best in literature and art—well grounded in a knowledge of that common law which underlies our modern civilization, and well abreast with every improvement in his profession; whose practical experience is such as to command the respect of the hard-fisted laborer on his land, than whom none are quicker to discover the greenhorn; a man whose knowledge of chemistry is sufficient to keep him from blundering in fertilizers; who is so versed in entomology as to be readily able to discover insect friends from enemies; to whom the principles of Mechanics and the laws of Physics are plain; to whom the instruments of the surveyor are familiar, and who has at his finger-ends all the fundamental problems of the Mechanical Draughtsman, and can prepare a map or profile of any portion of his land; whose knowledge of veterinary medicine protects his stock from the quackery of the country cow-doctor; in short, a man who will always feel sure that he knows more of farming than the "man in the moon," and will never consult that dignitary on any farming operations. He will be thoroughly familiar with the compact system in which modern botanists have arranged all the wondrous vegetable world around him, and in every process of his profession he will be able to give an intelligent "reason for the faith that is in him," and yet will ever be ready to acknowledge that he is still a learner, ever striving with reverent hands to lift the veil which hides the secret laws of nature, while he humbly acknowledges his dependence on the help of Him by whom all these laws were framed.

How are young men to acquire a training that will produce such farmers? Practical men long ago saw that, while the ordinary classical curriculum of our colleges is valuable as a mental discipline, it had always aimed at the training of men for the so-called learned professions; and that for practical life it must be supplemented by technical education. This has grown to such an extent that nearly every occupation has its technical school. The farmers' occupation lies at the very foundation of society, and his technical school should include, to a great extent, the studies of all the other connected sciences. The instruments and methods of the engineer, surveyor and draughtsman; the manipulations and re-agents of the chemist; the secrets of animal and vegetable physiology, as disclosed by the microscope; the digestion and nutrition of domestic animals, and the treatment of their diseases; the analysis of the botanist, and all the wonders of the plant world; the operations of the forge and anvil; the strength of materials, and the rules which govern the carpenter in the framing of buildings; the practical operations in field, garden, orchard and greenhouse; all these should be made plain to him, in addition to those literary studies which go toward making an educated man, thus rounding up and perfecting the most complete of all educations. The ideal Agricultural College has not yet been fully realized, but in a number of States these institutions are doing a grand work. In Massachusetts, Michigan, Kansas, Missouri, and even away down in Alabama, these schools are becoming really what their name imports. Will Maryland continue to lag behind? Much has been said of late concerning Agricultual Experiment Stations, and some of those already established are doing good, practical service to agricultural progress. At the same time, there is the danger of these stations getting under the direction of mere chemists; men of oxygen, hydrogen and other gases. The director of such a station should be a man of just such a many-sided education as I have indicated, and a man of natural administrative ability—such a man as New York has in Dr. Sturtevant. In my opinion the Agricultural College and the Experiment Station should be essentially one. Not that I would devote the entire area of the land usually belonging to an Agricultural College to experimental purposes, because I think that one great object of these schools is to teach young men how to farm *profitably*, and as there can be no *profit* of a pecuniary nature in experimental culture, the larger part of our college farm should be carried on upon strict business principles, with a view to making it profitable. The Experiment Station should comprise the director, with experts in chemistry, vegetable and animal physiology, botany, entomology, &c., and the students composing the final class in this department of the college. To the purposes of the station should be allotted sufficient land for experimental planting and observation and abundant laboratory room, and appliances for study and illustration. The students should be trained to be practical and independent investigators, and their observations, when of value, should have a place, and due credit in bulletins published from time to time for public distribution as interesting matter accumulates. One great field for these stations is the analysis of commercial fertilizers, not for the advertising purposes of the manufacturers, but for the purpose of making farmers acquainted with the true constituents of these articles when on the market and out of the hands of the manufacturer. This analysis should always, when possible, be accompanied with comparative trials in cultivation, thus showing the practical, as compared with the estimated, value of the article. This would be one great protection against fraud. A short time since a gentleman, a professor in a college, undertook to ridicule, in conversation, what he called "the childishness" of the investigations now being made by Dr. Sturtevant, of the New York Experimental Station, in regard to the germinating and producing capacity of grains of corn taken from different parts of the ear. Now, in my opinion the experiments of Dr. Sturtevant are far from chidlish, and are the very kind of cultural experiments which are to make these stations valuable to the farmer. Some "learned" experimentors think no experiments of value unless the caballistic letters and figures of the chemist are plentifully used. But experiments which tend to show that the seed corn, which we have always been in the habit of rejecting, is really the best to plant, will attract more attention and result in more improvement in farmers, than a learned article telling them that the grain of corn contains certain chemical ingredients and the cob certain others, valuable as this may be. Controversies are continually coming up in the agricultual papers, which farmers discuss pro and con, without ever arriving at a definite solution. These questions the stations ought to take up and investigate in a scientific manner, and make the result so plain as to set controversy at rest. Such a question has now been before the public for months past. Certain scientists, or would-be scientists and farmers, are contending that farmers have for years been throwing away money in buying ammonia as an ingredient in commercial fertilizers, insisting that its benefit is small when compared with its cost. This controversy has continued until the fertilizer trade is di-

vided into two classes, one manufacturers and extollers of ammoniated and the other of unammoniated phosphates. So far as I have observed, the cultivators taking sides in the controversy are more intent on proving their hobby correct than in making an unprejudiced examination into scientific facts. Now here is where the work of the Experiment Station comes in as an umpire to decide emphatically questions of this nature. Then all the questions still in doubt in regard to the values of various foods and food crops for domestic animals, to be ascertained from actual feeding results, as compared with their estimated value from analysis made in the laboratory, for we all know that some foods produce results in feeding entirely out of proportion to their analytical value. Then also the investigation and exposure of quackery in agriculture, horticulture and veterinary medicine, and the detection of spurious seeds, thus saving farmers from the wiles of designing men. Then again are the questions which ever vex and annoy the fruit grower—the pear blight and the yellows in the peach tree, the causes of which are yet undetermined, and the cure or preventive of which is yet undiscovered—the insects which infest and destroy our fruits, and the beneficial ones which prey upon the others—how best to destroy the one and encourage the other—and all the numberless difficulties which are ever meeting us in practical soil culture, would thus be made to add to and constantly increase the value of the papers sent out by such a station for the use of farmers, few or none of whom have time or facilities for making these investigations for themselves. And then what a grand completion of the course of a student at an Agricultural College would a year largely spent in such investigations be. Men trained in this way would never in after years become mere partisans, but patient investigators, more intent upon discovering and making plain the hidden laws of nature than proving some pet theory; thus ever building up a corps of patient and accomplished cultivators to assist and bless their Alma Mater, and inculcate throughout the land the principles of *true Farm Gardening*.

The Application of Manure.

A Paper by FRANCIS SANDERSON.

It is needless for me to say here what I mean by the word manure, but, in order to put all doubt at rest, I would say that anything that is food for plants we may call manure.

On the application of this plant food, or its right manipulation during these winter months, oftentimes depends success or failure on the farm. Manure is capital, and how important is it that it should be so utilized as to become productive at once! And yet of all farm arts it is one that is least understood, and I will venture to affirm that hardly two men in this room will agree as to its application. Some let it lie spread out in the open yards, its best properties to be washed out by every rain, or to soak into the subsoil and to be forever lost—at least to its owners. Others pile it outside of their stable windows—a detriment to their cattle as well as to their buildings—while some contend that a well-paved barn cellar is the place of all others to store this life blood of the farm. Which system is best we will leave to each individual's own preference, as each "is a law unto himself."

Having made many careful and practical experiments for the past ten years in bringing up a worn-out soil to a productive one, I thought I would give my views for what they may be worth.

I would state that my soil is a *clay* loam, and what would be the best treatment for that soil would be totally different for one of a sandy texture. But the great point is to make the farm produce all the rich manure possible, and to get it applied to the land in the *cheapest manner* so as to become immediately available. Acting under this conviction, I have laid down some rules, which I will here give:

First. That manure will do the most good spread in early fall or winter on soil to be plowed for corn or to be used for meadow. To this end, all manure, as fast as made, goes directly from the barn-yard to the field, and is spread thinly right from the wagon. If the ground is too soft for the team or it is deeply frozen, the manure should then be piled in a compact heap until some suitable time occurs to spread it. By this plan one handling and all washing and leaching of the manure is saved, and it immediately becomes *working* instead of *dead* capital.

Second. That two small applications of manure, evenly spread, will produce more in four years than the same amount carelessly put on at one time.

In travelling over the country in spring and fall we often see long, straight rows of little piles of manure, like checkers on a board. And they look very pretty, and no doubt they are to many an old-fashioned farmer. But that system is antiquated, and should be abandoned. What we want is the manure spread evenly and finely over the entire surface, as who could ever get the finer particles of manure of these little piles spread out evenly? Not I, for I have tried it often. So, then, we have a bunched field of grain, some spots being too rich and others too poor. We want the whole surface manured; we want an even crop.

In a factory, if it is a paying one, every hand and every machine is at work, and even the waste products are put to some use. So should it be on the farm. For this reason I believe and practice that it is the best for the land and best for the farmer to spread his manure on the soil in the fall and winter, plow it in the spring and then plant it to corn. Corn can take up and assimilate a great amount of manure rich in vegetable matter, while wheat, like an epicure, requires rich food daintily prepared. Wheat following this corn, drilled in with two hundred pounds of some good phosphate, will generally produce from twenty-five to thirty bushels per acre, provided the soil has been thoroughly worked, to make a fine yet firm seed bed.

I will relate an experiment or two:

In the fall of 1880, after reading Professor Cook's lecture on "English Farming" and how they managed to reach forty to fifty bushels per acre, I concluded to try my hand. So I drilled in thirty acres of manured corn ground with two hundred pounds of phosphate and one and a-half bushels of clean amber wheat. The corn stubble was thoroughly harrowed and then rolled and drilled, and left rough for the winter. Commenced drilling October 15th and finished on the 25th. In April a portion of the field (I stepped it off, and made it ten acres) looked rather thin, and I sowed two hundred pounds of the same kind of phosphate per acre. The result was a decided improvement. It was much greener, and when it headed out the heads were longer and the straw very stout. Each portion of wheat was harvested and threshed separately. The result was a yield on the spring-dressed of thirty-one and a-half bushels per acre and on the fall-dressed twenty-seven bushels of superior seed wheat.

The summer of 1881 being very hot and dry, the grass seed failed to take, and I plowed and re-seeded this same field, using the same amount of fertilizer. In April following, at the instance of Mr. Harris, of New York, I applied to the entire field a mixture of 150 pounds of phosphate and 150 pounds of nitrate of soda, and the yield was still further increased, yielding by thresher's measure 36 bushels per acre of 62 pounds per bushel, or 37 13-60 per acre.

This season I have thirty acres which I shall treat in the same way. We see that the nitrate of soda increased the yield very near six bushels per acre, and, with wheat at $1.25 per bushel, it makes quite an item in one's pocket.

Now Dr. Sharp, of Kent county, comes forward and says that wheat is not in need of nitrogen, but heavy crops can be grown with equal parts of ground South Carolina rock and kinit. If this is so, what a great saving it will be to every wheat grower! It is related of some celebrated English farmer, that when asked how he enriched his *land* he said, "With *brains*." The application would doubtless benefit our lands.

In conclusion, I believe in practical farming. The great advance in the world has come from practical men. Much of this knowledge of fertilizers can be obtained by farmers themselves, in reading and in common practice.

I believe that if farmers in their own neighborhoods, through their Granges or Farmers' Clubs, would each make accurate and practical experiments on some one crop each year, in a few years valuable knowledge would be obtained, and as valuable as if it were worked out at some high-priced scientific institution.

The Gunpowder Club.

The February meeting was held on the 17th at the residence of Col. W. S. Franklin, at Ashland, the Club first assembling for the inspection of his newly acquired farm on the York and Western Run Turnpikes, a mile or so distant. This beautifully situated property was found to be undergoing rapid improvements in the way of fencing, ditching, liming, etc. The only new building yet erected is a wagon shed, corn crib, granary and implement house combined, with a root cellar beneath, which was voted a model in its compact arrangement, substantial construction and moderate cost. Many convenient devices for saving time and labor were noted and approved. A lot of some thirty-five steers, which were being fed, was much admired for their thrifty condition and quietness, showing they had been gently handled, a practice often reversed to the disadvantage both of animals and owner. They were knee deep in straw and were evidently comfortable, as well as profitably engaged in making a great quantity of manure.

The grain fields were not visited on account of the unpropitious weather, but from a sketch of Col. Franklin's designs, it is evident he proposes to make this one of the most productive and best paying farms in the vicinity as it is certainly one of the best lying. At the Ashland farm the inspection was limited to a view of the fine team of six mules.

After the customary reading of the proceedings of the last monthly meeting at the same place, the Club devoted a half hour to questions.

The inquiry being made: "What is the best fertilizer for oats," South Carolina rock was recommended. John Crowther, Jr., had applied 250 lbs. (dissolved) to the acre, and got good oats and also a good set of grass.

A considerable portion of the 'half hour' was taken up in discussing the propriety and economy of the members of the Club and other farmers along the line of the Northern Central Railway sending their produce to market by the cars instead of wagon. The Railroad Company, desirous of meeting the views of the farmers, has made enquiries as to their wishes in the promises, proposing to reduce rates if thereby the business of the road may be proportionately increased. Various suggestions were made as to what would be satisfactory to shippers, and a committee appointed to consult with the officials of the company.

The regular question for the meeting was: "How can we derive the greatest benefit from the use of lime?"

Nelson Miles hauled right from the pit on to the plowed ground he was going to put in oats, and harrowed in. Believed in applying at a moderate rate, distributed in large piles from the cart.

Samuel M. Price applies on clay land on the plowed ground in a powdered state; on hilly land, puts it on the sod, to avoid washing. About 30 bushels of lime is enough for an acre of any soil for one dressing; would put on only 25 if it could be got on regularly. Lime lightens clay soil.

Q.—Would it not have as good effect to put it on sod for clay land? *A.*—No. Is a great advocate of lime; it has done more to restore run-down land then anything applied. It has doubled the products on his and many other farms before the use of phosphates. Put out in half bushel piles and spreads as soon as slaked. Watches it closely, so as not to let it get too wet. Waits till spring to put out. After it gets wet it never gets dry enough again to spread. The first field to which he and his father applied lime gave them 120 barrels of corn; it then was cropped in corn, oats, wheat and grass, and then gave 240 barrels of corn; received another application of 50 bushels of lime and gave 285 barrels of corn. Lime does just as well on limestone as on black rock and flint soils.

John Crowther, Jr., prefers putting on land after it is plowed to putting on sod, and to spread fresh, though ordinary farm hands are too careless to do this. Lime hastens the decomposition of vegetable matter in the soil and this is its chief benefit; it brings into activity dormant matters in the soil. Lime is not a manure, and will not act unless there is vegetable matter present. Thirty bushels is enough, but would not be afraid to put 50 bushels on heavy soil.

John D. Matthews prefer liming on sod at all times, as he gets over the ground more readily. Likes to apply to young grass, which it benefits greatly, as soon as harvest is over. It encourages the growth of vegetable matter. When he can grow grass he can grow any crop at all. About 50 bushels is what he prefers on heavy soils; on light ones, rotten rock, 25 bushels are enough. With him it has doubled the growing grass crop, spreading right on top. One of his fields, which had been mown three years, had applied to it 40 to 50 bushels of lime as a top-dressing, and gave the same season a heavy crop of grass, and heavier crops of grass, corn and wheat for six years afterwards.

B. Mc.L Hardesty is in doubt yet as to the best plan. Tries on both sod and plowed ground, putting on 25 or 30 bushels to the acre, in a quick state, right from the kiln. *Q.*—Would lime, applied with manure, aid or prevent its rotting? *A.*—Don't think it would aid it.

W. W. Matthews' preference is to apply on sod in spring, two years before breaking. Puts out fresh and spreads immediately.

Col. Franklin has tried lime on corn ground after plowing; on sod ground and plowed under, and on corn ground plowed for wheat giving about 50 bushels to the acre, though part of the land got 100 bushels. The results will have to report later. Puts out in bushel-piles, but had to wait a long time for it to slake. It is very easily spread evenly by running cross-furrows and putting the piles at the intersections. *Q.*—What about the use of pulverized limestone? *A.*—Has known of no cases where there are any visible effects. Slaked cinder from the iron furnaces is now being tried by neighbors; does not know with what results.

Ed. Austin has limed all his farm in last ten years, 30 bushels to the acre. Puts the lime in one pile in fall and spreads in spring. That spot is greenest in the whole field. Believes the mechanical effects of lime are great and that as a sweetener of the soil it is very valuable. Its effects last a long time, as the amount carried away by crops is very small.

[Compelled to leave before the other members had expressed their views, our report is necessarily imperfect.—ED.]

Management of Manure.

The last subject for debate in Myrtle Grange, No. 106, Anne Arundel County, Maryland, was proposed by S. Linthicum, who wanted the views of the members upon the best way to manage manure to prevent its burning and consequent loss of strength. A. Rider was in favor of applying at once and plowing or stirring in; thought there was more strength in that which had not undergone fermentation; believed in using it liberally and spreading broadcast when practicable; would not advise broadcasting steep hillsides in fall or winter, as there was too much loss by washing away. Liked new manure for applying under early spring crops; was warm and seemed favorable to rapid growth. When obliged to keep manure over from early fall until spring, would pack tightly in a large heap, drive over and trample to exclude air as far as possible. Manure will not burn if the air is excluded; would turn occasionally and pack tightly as before until active fermentation ceased.

J. S. Benson believed throwing up in high piles would rather encourage heating; it will not burn at the middle and bottom of the heap; would turn it often until thorough heating. Liked well rotted manure for applying in hill or drill.

W. Hawkins thought it a mistake to pile too high; had better success with shallow heaps; would advise beginning a pile by first laying a good foundation of filth, sods, etc., as an abscrbent of the liquid part of manure which naturally leached downward and is in a measure lost; favored mixing compost of some kind with stable manure as a preventive of "*fire fang*."

W. A. Shipley was in favor of getting manure upon the land as soon as possible, but in trucking this was often impracticable owing to the common method of applying in hill or drill. Where manure is to be piled up in the field for spring use, would recommend A. Rider's plan of packing tight. In working over would cover the pile with loam or plaster to catch and hold the escaping ammonia, which is the most valuable part of manure. Has seen pure sand spread upon the pile made as rich as manure from the absorption of ammonia; would recommend making the heaps upon poor knolls as an offset to leaching and washing away. Had no trouble finding good sites for heaps on his place.

G. W. Merritt thought it a loss to buy manure in the fall and keep over until spring. It lost half its bulk and seemingly half its strength; saw better results when applied fresh and unfermented; had good success with fresh manure applied early in summer, it seemed especially to suit potatoes of all kinds; would not advise placing fresh manure in hills in early summer.

F. Meushaw was in favor of getting as much manure as possible, and spreading broadcast upon the land. It pays better to manure one acre well, than to stint three, as it would produce more. Where hillsides were torn by gullies washing in them, liberal manuring had cured the evil; thought it the best thing in use to prevent washing. If manure was to be kept over in large heaps, would make no objection to its heating; would overcome the trouble of burning by mixing rich mould, street dirt, etc., with the manure. A liberal application of water would also prevent burning.

Other members present gave their views, which were somewhat similar to the above. Great stress was laid upon the importance of preventing loss of ammonia, which always ensues during active fermentation, by the free use of absorbents, such as loam or plaster. The latter it was claimed caught the escaping ammonia, crystalized and held it until wanted for use. Although less in bulk, but little loss of strength will occur by spring if the manure is properly managed. R. S. C.

Harman's, Md., Feb. 20.

Three-Fourths of an Acre Yields $531.62.

Messrs. Editors American Farmer:

Early in 1882 I selected three-fourths of an acre of light, loamy soil and gave it a light broadcasting of liquid night-soil, which was plowed under February 5th. On March 1st I gave the land a light dressing of decomposed garbage, after which it was thoroughly plowed and harrowed. Then with a medium-size one-horse plow the land was run off into rows about twenty inches wide, which were rolled down with a light roller.

Ten pounds Bolgiano's long-root scarlet radish were sown broadcast with the hand; then sowed with Norris's seed-drill five pounds Bolgiano's improved turnip beet and twenty-four rows in white summer radish.

The 4th of July found the land cleared from these crops. Then the land was flushed down and Burbank's potatoes dropped in every third furrow. Very wet weather in September damaged the potato-vines and lessened the crop one-half, which yielded only eighty bushels.

On December 1st I planted the sand land in Jersey Wakefield cabbage for a crop to mature in 1883.

I gathered from this land and sold through Messrs. Ewing & Son, commission merchants:

5,500 bunches long radishes, at 2½ cts. per bunch	$137.50
1,500 bunches white radishes, at 2½ per bunch	41.25
8,025 bunches beet radishes, at 3½ cts. per bunch	280.87
80 bushels potatoes, at 90 cts. per bushel	72.00
	$531.62

Having a little leisure, I thought it would be interesting to your readers to know what had been actually accomplished on three-quarters of an acre.

WILLIAM T. HACKETT.

Patapsco Neck, Baltimore Co., Md.

The Washington County Prize Corn Crop.

Mr. James C. Greenwell, of St. Mary's County, Maryland, and several others, wish to learn through THE AMERICAN FARMER, all about the quarter of an acre, cultivated in corn by John C. Harp, of Washington County, Md., as a contestant for the Newcomer prize, at the last exhibition of the Washington County Agricultural and Mechanical Association. The following is the

STATEMENT

"of John C. Harp, Beaver Creek P. O., Maryland, age 15, a contestant for the Newcomer prize for raising corn." Dimensions of land 205½ feet long and 53 feet wide; heavy clay limestone soil; plowed on the 17th of April, 1882; kind and amount of manure and fertilizers, three one-horse loads of barn-yard manure, three one-horse loads of hog-pen manure, and two bushels of wood ashes; the three one-horse loads of barn-yard manure were applied before plowing, and plowed under; the three loads of hog-pen manure were applied after plowing, and the two bushels of ashes were sprinkled along the rows; the seed corn was yellow, planted on the 19th of May; two grains dropped in each hill, one stalk was left in each hill generally, occasionally two; the rows three feet apart; the corn planted 9 inches apart, cultivated with the hoe three times, plowed with shovel plow three times; about half the corn was topped about the middle of September; height of tallest corn 16½ feet; average height of corn 14 feet. Corn harvested October 5th, 1882; the estimated value of manure used was three dollars and fifty cents. Number of days in cultivating and husking corn 15; the corn as above weighed in the ear 3,553 lbs, making 30 flour barrels and 13 lbs.; weighed 118 lbs. to the barrel.

"I certify upon my honor that the above statement is in my belief true, and that I did all the work above named, except help in husking, and that all the corn named above grew on one-fourth of an acre of ground."

"Dated this 5th day of October, 1882.

"JOHN C. HARP, Contestant."

CERTIFICATE.

"The undersigned, a committee appointed by the Washington County Agricultural and Mechanical Association, certify that the corn named above was husked and weighed under our supervision; that it was ripe and in suitable condition for husking; that the same weighed 3,553 lbs.; every ear that had twenty or more kernels on it was weighed; we are satisfied that the same was fairly raised by John C. Harp, on one-fourth of an acre of ground, the same being measured under our direction, and that the contestant's statement made above is substantially correct.

WM. NEWCOMER,
HENRY LANDIS,
Committee."

Agricultural Matters Abroad.

From our Correspondent in Paris.

VACCINATION OF FARM STOCK.—Farmers are too interested in the health of their live stock to view with indifference the scientific position of the experiments being made to counteract typhoid fever in horses, the rot in sheep, the *charbon* and pneumonia in cattle, the "cholera" in pigs, &c., by means of vaccination. M. Pasteur's discoveries date from his investigations of hen cholera. He found in the blood of the infected fowls a parasite, almost invisible, and that he called a microbe. When he inoculated healthy birds with the virus they immediately died, presenting the same same symptoms as if they had naturally contracted the disease. But when he produced the virus artificially and inoculated healthy poultry with it they were rendered proof against the cholera. Hence the importance of vaccination as a preventive. The same principle was applied to contagious maladies affecting cattle, sheep and horses, with equally happy results. The stock vaccinated all escaped; such as were not, succumbed. Veterinary Surgeon Boudet, of Chartres, has vaccinated 85,000 head of cattle alone.

M. Koch, of Germany, criticises the results of M. Pasteur's inquiries. He does not demonstrate them to be erroneous but subject to caution, and, above all, he insists that we must not conclude the problem of prevention or cure of cattle plagues to be solved. He is of the opinion that M. Pasteur has not sufficiently examined the blood and tissue of diseased animals to find the microbe or parasites, and that rabbits can be killed by inoculating them with the saliva of a healthy man, as well as with the nasal secretion of a horse dead from fever.

M. Pasteur attributes the *charbon* and *rot* diseases to worms bringing to the surface of the soil the microbes generated by a carcass buried and having died from the disease. The microbes are carried by the wind on the grass, and thus when feeding enter into the system of sheep, &c. M. Koch does not believe in this action of worms as the promoting cause of cattle plagues. He has not found it to be borne out by direct experiments made by himself, while in marshy lands and in the cold regions of Siberia, where worms cannot act the cattle pest is a permanent visitor. The important question as to vaccination proving an immunity against the malady does not appear to be denied by M. Koch. He has found it only occasionally to fail. But has he faithfully carried out Pasteur's instructions, who has a mass of evidence corroborating the efficacy of inoculation?

M. Pasteur having succeeded in new experiments for the inoculation of cattle with virus artificially prepared as a preventive against peri-pneumonia, the local societies are organizing measures to have the experiments tested on a large scale.

IMPROVING THE HORSES OF FRANCE.—The French goverment is making most laudable efforts to improve the breed of horses in the country. It has just voted a law that no stallion will be allowed to cover mares which is not provided with a certificate, and to be renewed every year, setting forth the absence of certain diseases. An infringement of this law entails a fine of fifty to five hundred francs on the owner of the stallion, the man in charge or the farmer who allows his mares to be covered.

OATS are proverbially an exciting food, and popularly and truly viewed as necessary to impart fire or vitality to horses. Of late years this opinion has been called in question on purely chemical grounds. It was assumed that the fatty matters of the grain confined the strength; hence nothing more simple than to supply other food that would be equally rich in fatty matters and costing less. Chemical analysis, however, was not able to demonstrate that oats possessed no special property independent of their nutritious value. Professor Sanson has examined this subject closely. He finds the excitable matter of oats is contained in the pericarp of the grain; is not aromatic as vanilla; has no analogy with that substance. On the contrary, it resembles opium or nux vomica, and is highly nitrogenized. He calls this exciting matter of oats *avenine*. It varies not only with the variety of oats, but with the place where they are cultivated. As a rule, white contain least and black oats most avenine. Those grown in Sweden reveal no great difference, but the variation is sensible in Russian oats. Below nine parts per thousand of oats the dose is insufficient to excite a horse, and the influence of this excitation lasts for one hour per 2½ pounds of oats. Bruising oats lessens the action of the avenine. If a horse, then, be required to trot, &c., during a period of four hours, 9 pounds of oats will be necessary. Any quantity beyond that will be a useless expenditure in point of production of energy or excitability, and, as the latter is produced immediately after the oats are consumed, hence horses intended for a journey should only receive their feed just before setting out.

Varieties of Tobacco.

SOIL.

Maj. Ragland, of Halifax Co, Va., is credited in an exchange with the following instructions:

No soil is adapted to tobacco that is not well drained, naturally or artificially. A close, wet surface soil, overlaying an impervious clay, is wholly unsuited; but a mellow surface soil, with porous subsoil, that permits the rapid and unobstructed descent of all superfluous water, should be selected to grow a plant that, of all the farm crops, except cotton, requires the least moisture to mature.

The selection of the soil adapted to the type is most important. For a dark, continental type, choose a deep, rich, silicious soil, alluvial or clay; for White Burley, rich, dark, limestone soil; and for wrappers, fillers and smokers, a gray surface soil with yellow subsoil is best—in fact, is essential.

VARIETY.

We unhesitatingly assert what is our deliberate opinion, founded upon long experience and extensive observation, that the failure to plant varieties suited to the type sought to be produced, is the cause of more failures than result from any other source. In many portions of Virginia, North Carolina and Maryland, may be seen every year fields of tobacco with two, three four and more varieties all growing in the same row, differring in shape, color and texture, and ripening irregularly—some early, some late and, as a matter of course, curing irregularly, making several types in the crop; or, from general incompatibility, resulting in a product classed as nondescript, the meanest and least desirable of all.

A successful James river planter would almost as soon sow Havana seed as the White Burley for his English or continental types. And what would be thought of a planter in the yellow tobacco belt if he were to plant Big Frederick, Long green or Bull Face for brights?

There is an "external fitness of things" in this business that must not be disregarded, if success and profit are sought for by the planter. The "White filler," so popular now, has never been so successfully grown on silicious as on limestone soil; nor has first-class "golden wrappers" been produced from the White Burley in Kentucky, Ohio or elsewhere. Repeated efforts of the writer to make yellow goods of the Burley have resulted always in failure.

To succeed, the planter must suit the variety to the type, and plant seed leaf, Little Dutch, Havana or some of the hybrids for cigars; the large, rich, coarse varieties, such as Big Oronoke, Blue or Medley Prior, etc, for the dark export type; while for the manufacturing types most in demand by manufacturers and their customers, it is important that varieties should be selected which have proved best suited thereto. Some of these possess a peculiar adaptation to certain soils, as shown by greatly better products than from others grown on the same soil, and knowledge of this adaptability comes only through experiment. For instance, the Oronokes and their hybrids develope more perfectly on sandy, gray soil, while the priors and their hybrids do best on slaty soils.

Beginners, in raising the type, cannot go amiss in planting the Hyco, which is unquestionably the easiest of all to cure of a yellow color. The Hester, Bullouch and Gooch, are all new and desirable kinds, as the writer knows from trial.

Tobacco seeds have been greatly improved by continuous selection every year from the best plants in shape, color and texture, and by trimming off the lateral sprays of these and permitting only the crown-shoots to bear seed. Plants grown from such seed possess more vitality and are better in every respect than those grown from seed saved after the old mode.

Unleached Ashes.

The *Massachusetts Ploughman*, in reply to a query of a correspondent, says: Unleached ashes are valuable for almost any crop and improve almost any soil, but they do not act as quick when spread on grass land as many other fertilizers. For this reason it is best to apply early in the autumn if intended to force a first crop of grass the next season. When applied to hoed crops it is better to apply in connection with other fertilizers. Mixed with ground bone in equal proportions, a fertilizer is made which has but few equals for a field or garden crop.

For sandy land, mixed with muck a few months before using, makes an excellent compost, and when applied in liberal quantities changes the charcter of the soil for the better.

Coal ashes contain but very little plant food, but on some soils they prove very beneficial when liberally applied—no doubt because they change the soil by chemical action. When kept dry and are well sifted they make a very good material to absorb the liquids of the house, especially if they have mixed with them an equal portion of dry muck.

The *Old Commonwealth*, Harrisburgh, Virginia, says: "We do not hesitate to recommend it, as we know it to be one of the best published, especially for the farmers of this section, because of the similarity of our farming operations to those of Maryland. Try THE AMERICAN FARMER and if you say honestly you do not like it we will surrender our judgment on agricultural literature."

Live Stock.

The Blooded Horse.

Messrs. Editors American Farmer:

I was much pleased with the article in your February number, the "farmer's horse, how to breed him," as it was the principle I acted on many years since. If you have forgotten, the records of the agricultural societies will show you that years ago, I attended to raising blooded animals of all kinds. I do not claim to be young; of the large number of scholars of the school of my boyhood, but one, beside myself, is *known* to be living, though it is *believed* another lives.

Will it be agreeable to you for me to add something to it as a voice from the past? The blood horse in his purity is not naturally large, but his muscles and sinews are like cords; his bone though probably not half the size of the coarse horse, from its solidity will probably outweigh the porous bone of the latter; the blood horse is, doubtless, the best cross to acquire action, strength, speed, bottom, durability, and what is a racer or trotter without these qualities? I knew a horse 39 years old when killed by others. It would be far from judicious to breed from a blooded horse merely because blooded; many are washy, but sift the *quality* of the blood, for the needed quality cannot be expected from a family that never possessed it. Would a man breed a mare to a Jack expecting a horse colt? In all animals, qualities run in *families* and must be sought *there*.

Many years ago, before a Railroad or even a turnpike was made here, farmers hauled their flour to Alexandria, (between 60 and 70 miles) in wagons and had fine six-horse teams; 20 barrels of flour was considered a large load. I saw Mr. Peters' team of 6 horses from above Winchester near 20 miles further over a dirty road, hilly and rough, pass through this neighborhood with a load of 55 barrels of flour. Farmers went to see him stall going out of the river or up the mountain, but they overcame both obstacles without difficulty. Citizens met them out of Alexandria to see them going, if any of this team was over 15 hands it must have been the wheel horses, and they not over 15½ hands, but all were well bodied and built up from the ground.

Although never on the turf, I have had long experience with the blooded horse and differ somewhat from *The Breeder's Gazette*. I think them intelligent; can be taught many things; affectionate and grateful for kindness; spirited of course, and dread the lash; if patiently and kindly instructed in your wishes, they will readily obey; when fretful, impatient or ill-tempered, it is likely to be the fault of the breaker who thinks the whip important in his act, and the horse connects it in his memory with every thing unusual, and his constant dread of it causes fretfulness. Sometimes standing in the cold, makes them playful until warmed. The whip ought never to be used but to make a horse go forward; I have seen them severely punished for frightening, also for blundering; this was a great error; they cannot help it; when occurring again, their memory connects the lash with it and makes things worse, so they can be hardly pacified; have patience to let him approach the obstacle in each case and satisfy himself and in time they will gradually lose that sense of fear. The lash has never corrected either fault. My saddle mare, high bred, that I have used in that way, though close to the first locomotive she ever saw, a thing well calculated to alarm man or beast that never saw or heard of one before, showed no alarm, only raised her head and looked on.

I intended saying something about breeding, rearing, breaking, but think I have long passed your space, with propriety, and will close with saying, the blood horse does not mature early, but if his work is not too hard before his bones and muscles ripen and harden he will be useful and valuable for many years. J. W. WARE,

Clarke County, Virginia.

[We are ever pleased to receive the contributions of our old friend Col. Ware, upon the subject of blooded stock, and his allusion to the time when he was engaged in the business, reminds us of a visit we paid at the time to his elegant and hospitable estate, in company with a number of our best farmers friend Jackson, also of Delaware, together and sheep breeders of Maryland and Delaware, where we were witness of his great success in that department. The Reybolds of Delaware, one of whom, if we remember right was of the company, and our genial with Mr. Hy. Carroll and his son, Mr. Wm. Jessop, and others, of Baltimore county, secured some of the Col's. fine sheep on the occasion of our visit, which were transferred to their own farms for the improvement of their own flocks—specimens from which were accustomed to be presented at fairs of our old State Society. Of those who composed the little band on that visit to Col. Ware, we can recognise now none in the land of the living but the host and ourself, except the youngest of the number, then quite a youth. What a reminder, old friend, is this to us, who are still on the scene of action!—SENIOR EDITOR AMERICAN FARMER]

The Jersey as a General Purpose Cow in Garrett.

Messrs. Editors American Farmer:

The Jersey cow seems to be coming to the front in Garrett county as a general utility cow. There are many people here as elsewhere, mechanics, small farmers, professional men, &c., who keep but one cow, and we find a decided preference for Jerseys, and they give almost universal satisfaction. The demand for them is bound to grow, and breeders of Jerseys can feel secure in investing in high priced stock. There is a conviction abroad that the present boom in Jerseys will not last, but there are comparatively so few of them as yet in the country, and as in the very nature of things there will be a more general appreciation of their merits, the demand is sure to be an increasing one.

A writer in the *Ohio Farmer* who will no doubt be widely quoted, condemns the stock for farmers' use generally. After denouncing the breed for dairy purposes, he says that for beef they are "utterly worthless." I don't propose to take issue with the writer, but I would most respectfully beg leave to suggest that more moderate language would carry stronger conviction. Perhaps the gentleman is a victim of the frying pan; it would be uncharitable to presume that he don't know what good beef is, and we all know what transformation that self same frying pan is guilty of. It is a sorrowful day when a Jersey must go to the shambles, (we have never had any experience with anything but the grades,) it does occasionally however happen, and from 8 weeks and over the beef cannot be excelled. The grades are generally symmetrical and get into good form for beef and in size superior to the general run of farmers' stock. We do not claim that the Jersey is the ideal farmers' cow, such a cow would of necessity combine all the qualities of the different breeds. It is pretty safe to say that such breed will never be found combining in one cow the butter qualities of the Jerseys, the milking qualities of the Ayrshire, and the beef producing qualities of the Shorthorns. If such breed ever should be originated it will be after the present generation, and at the expense of great experience, much money and many years of patient waiting.

We are too warm a friend of the Jerseys to be a disinterested witness in a case of this kind, but it is our firm belief based on what we have observed in our own section that an infusion of Jersey blood would be highly advantageous to about every herd of farm cows in Garrett county. Good cows worthy of a place on a farm in this county where our winters are long, grain scarce and high, and butter such an important item, are the exception, where they should be the rule.

E. H. GLATFELTY.

Grinding Corn and Cob Together.

There has been a great variety of opinions expressed upon the value of the cob ground with the corn, many supposing it to be injurious to the coatings of the stomach, even in horses, and a pig's stomach has been thought by some as incapable of managing such hard material as the scales of cob; but we long since experimented with corn and cobmeal, and found all these adverse opinions merely imaginary. We have fed it largely both to swine and horses, and never saw any ill effects from it, but, on the contrary, found it a healthier feed than clear meal.

The advantage of grinding the cob and corn together is not altogether in the nutriment of the cob, being a coarser and a spongy material. It gives bulk, and divides and separates the fine meal, so as to allow a free circulation of the gastric juice through the mass in the stomach. Corn meal, when wet into plastic dough, is very solid, and not easily penetrated by any liquid; and when pigs are fed wholly on corn meal, they often suffer with fever in the stomach, because the meal lies there too long undigested.—*Chicago National Live Stock Journal.*

The Dairy.

Good points on making Butter.

A writer in an English paper says: There are three things which affect the taste of butter and its capacity to keep—the food of the cow, the method of setting the milk, and the system of making. In England butter is largely made from loppered or soured cream, and this system is still taught, but is raticalally wrong. It is never so sweet as when made from seperated cream or purely sweet new cream. Bad herbage or food of other kinds must effect the taste. A damp dairy exposed to drains or smells also effects its quality in a vital manner. But the method of making has also much to do with the quality and quantity. I have seen it made in various countries in Europe where the district is famed for for sweet butter, and everywhere the makers treat their subject as an art, and reap results accordingly. When everything is ready and the cream well stirred, it should poured into the churn, its temperature being about 58 degrees, or from this to 61 degrees, and to test it a thermometer should always be used. If the dairy is a degree or two below these figures the cream will be all right; if it is too low the cream may be removed to a warmer apartment until it has reached the required temparature. Some people add warm water, but it is dangerous to raise the temperature suddenly or too many degrees at once. Small churns are sometimes placed in pans of hot and cold water, according to the season, but in summer very early morning will be found the very best for churning. Very cold water or ice should never be added, for the temperature excited is not then regular. The cream being regular, churning should commence, and whether it be hand, horse, or steam power, the action should be regular, say 45 revolutions a minute. At first the churn should be ventilated a few times, or it will take longer in coming, that is, unless the churn is self-ventilating. It is best to use those which, like the barrel or the swing, act upon the whole of the cream at once, instead of only a part. Hence small beaters or dashers are objectionable. A churn should never be filled too full; it may be used for a small quantity, but never for an

extra large quantity of cream, and if half filled, and know more, will do very well. Whatever the churn, the butter takes longer to come at some seasons of the year than at others, while sweet cream churns quicker than sour cream, and clotted cream much quicker than either.

Poultry Yard.

Early Chickens.

It is an old saying that the "early bird catches the worm," while some wag has said, "the worm had no business to be out so early and get caught." But it is the early chickens that pay, not only in the market for broilers, and as layers in the fall and winter, but for early setters in the spring. A chicken is a small thing in the economy of many farmers, yet the aggregate amount of eggs and poultry sold is immense. It takes a long time for a penny to become a dollar in value, yet it will, if properly invested, soon grow to that amount. And a chicken or a dozen eggs bring but a few pennies, yet these small sums soon amount in the aggregate to millions of dollars. But, as we said above, it is the early chickens that pay; hence the question arises how shall we produce them. We will give our mode and experience, which works very well with us, but may not prove successful with others under different circumstances. 1. The hens must be well fed and have good, warm, clean and well ventilated quarters during cold weather. They will then lay well during the entire winter, and as soon as it begins to warm up, they will desire to sit. 2. The hens should be in a place where other hens cannot trouble them by laying in the same nests. 3. The eggs should not be placed under her until she has been tested two or three days to ascertain if she is in earnest and will stick. 4. Hens will hatch better if the nests are on the ground, and in the early spring care must be had that they are in a warm place where the frosts will not chill the eggs. 5. Care must be taken not to give the hen too many eggs; if so, all may be spoiled, while if she had fewer all might hatch. Eleven is enough for any ordinary sized hen to cover in the spring. If the nests are made in boxes and not in contact with the ground, an inch or two of common earth placed under the straw will be found beneficial in keeping the eggs moist. But if the nests are elevated so that no moisture can be gotten from the ground, the eggs should be sprinkled two or three times a week with warm (not hot) water. 6. It is well to sprinkle some sulphur in the nests and sometimes rub a little through the feathers, and especially under the wings of the setting hen, in order to free her from lice. She will never succeed well if she is troubled with these pests. 7. Hens in early spring very often break some of their eggs; these should at once be removed, and the sound eggs thoroughly washed in water milk-warm, made into a soap-suds, wiped dry, and replaced under the hen, after all the straw has been removed that was affected by the broken eggs. 8. The time of placing the eggs under the hen should be carefully noted, and on the twenty-first day they should be examined, for it often becomes necessary that assistance should be given the young chicken by removing the shell, for at this season of the year the shells vary much in thickness, some being so thick and hard that the chicks can scarcely pierce them, while others are so thin that when once pierced the weight of the hen crushes them down and kills the chickens. At this season of the year, when young chickens are valuable, we always remove the shells as fast as chickens come out. It frequently happens if they are left in the nest, that other eggs get into, and are partly covered by the old shell which smothers and keeps the chicks from getting out. 9. We always take the young chicks from the nest as fast as they come out, leaving the mother hen to bring out the balance. When all are hatched we place her and the chickens in a suitable place where they feed on boiled eggs and crumbs of wheat bread for a few days, when other feed is substituted in part. In two weeks we feed mostly bread made from corn meal, shorts and bran, equal parts. 10. Fresh water and feed should be convenient, in order that she will not remain long from the nest in search of food and drink, as eggs at this season soon become chilled.—*Western Stock Journal.*

Horticulture.

The Orchard and Fruit Garden.

If we were quite certain that having the *bodies* of fruit trees smooth and clean, was permanently and generally beneficial, we would then suggest to our readers to wash the trunks with soap-lees, or whitewash them; but the experience of the last two years has been of such a character as to make the utility of such labor *questionable* at least. We have always felt some pride in having the bark on the trunks of our orchard trees present a clean, glossy appearance, and expended time and labor to have them so, by annually washing with lime, etc. Of course, the wash, whatever it may be, is soon carried to the collar of the tree by heavy rains, then the smooth shining bark serves only to increase the heat of the scalding rays of a July sun, and thus affects, deleteriously, both tree and fruit; hence, we have determined to curtail the "washing" operations so as to leave alternate trees of same kind to grow as nature herself grows them, so far as the bark of the trunks is concerned.

The grafting of cherry trees should be performed early in the season to insure success; other fruits, such as apple, pear and plum, can be delayed later into spring without endangering their chance for living; assuming, of course, that the grafts have been cut and stored as per February suggestions.

Planting will claim attention this month also. We, of course, do not think it necessary to mention in our suggestions here to the readers of THE AMERICAN FARMER any of the numerous advantages secured to those purchasing and planting trees by ordering direct from a nursery of good repute, instead of ordering through the self-sacrificing (?) agent; any one of ordinary business capacity, upon a moment's reflection, can readily see why he is safer in ordering directly from the nursery, than by entrusting the fulfilling of his wants in this relation to one who, in order to live and clothe himself, must add to the nursery prices—accordingly.

The "mania" for new, aye! the *very newest* kinds of fruit, is extremely contagious, and, though not very often fatal, has a tendency to produce a shrivelling of the purse, that sometimes causes men to speak rather harshly about some of their fellows. The disease is so fascinating, so seductive, that nearly all fruit-growers fall a prey to it, once—twice, yea! several times, before they know how to treat it. Here, for instance, is a new kind of apple, so much, oh! so *very* much superior to the old kinds,—the trees grow much faster, bear much younger, so *much* more, too,—of fruit, better, larger, handsomer:—that brings almost any price you ask for it, when sent to market; and the dear agent offers to bring them right to the door, for a dollar each,—surely there are "millions in *it*" (for the agent). And then those new peaches, pears, (the reader is here most respectfully referred to the Keiffer and Le Conte,) and, oh! what a generally domesticated "bonanza" there is in grapes. As to strawberries and raspberries, it would appear from the *latest*, that a few dollars invested here, throws all other "stocks" in a regular December shade; and so it goes. If you can, by the natural strength of an "old fogy" constitution, resist each and all of these dangers, and persistently pursue the even tenor of a sane fruit-grower's life, you have risen beyond the financially justifying fame, that afflicts the morals and purses of many of your less fortunate fellows. Reader, don't understand us as opposing the introduction and planting of *new varieties*; oh! no, we are decidedly in favor of this; but we do not approve this wholesale and very progressive system of misrepresenting the merits—the *real* merits of new kinds of fruit,—a system that involves the very best mental efforts of disseminators,—couching descriptions in most extravagantly colored terms—intended only to secure orders, reckless of all other results and conditions, to this we are unqualifiedly and unconditionally opposed, and ask in its stead, for the plain facts,—in short, the truth.

The York Imperial Apple.

In accordance with your request in last number of the FARMER, I would say that I have about a dozen York Imperial Apple trees planted eleven years ago, which have been bearing for the past four years, only large crops every other year; this past year several of them were very full, so much so that I shook and picked a great many from the trees when very green, so that the trees would not be broken. They hung on the trees well and we did not pick them until the 7th of October, the apples were very solid, free from worms, and but few were lost by rotting. We still have some on hand quite firm and I think will last until April. Ours grow very solid at core and as your Caroline correspondent says, they may not be considered A. No. 1, still they are certainly a valuable apple for

CARROLL COUNTY, MD.

Referring to "Caroline Soil's" article in your last number, the York Imperial or Johnson fine winter apple, is one of our surest bearers and best apples here and is a good keeper. It is one of the most profitable varieties grown in Virginia.

Richmond, Virginia. E. H. B.

The Culture of Strawberries.

The strawberry king of the West, Parker Earle, of Illinois, who has eighty acres under strawberries, writes thus concerning the culture of strawberries: It is not absolutely necessary to mulch strawberrics for winter, but I think it is essential to the crop in the gathering season. Unmulched berries will be more or less dirty, and cleanness of berries is important. A good mulch also helps a drouth. My plan of mulching is not to cover the plants, but the paths and all other vacant ground. It will lap on to the rows somewhat. This plan prevents frequent freezing, thawing and consequent lifting of the plants, and there is no uncovering to be done in the spring. Where the winters are more severe, the complete covering of the plants may be necessary. We cannot wholly prevent weeds, wheat and "cheat" from growing in straw mulch, but much of the seed can be shaken out by pitching the straw first upon a platform of rails, then on a wagon when hauling from the stack.

I plant rows 3½ feet apart if for matted rows. The distance apart in rows depends upon the variety. The free-growing kinds may be two feet or more apart with safety. if the runners are to be cut, one foot apart would be right. I would rather not have rows thickly matted, but it is difficult to prevent it with our free multiplying kinds. If plants could be secured about six inches apart over a row eighteen or twenty inches wide, it would be an ideal row. But that would involve an intricate and laborious system of runner cutting, far surpassing in cost ordinary hill cutting. I do not think it would pay to thin out the thickly matted rows in early spring, as, if plants are to have space, they need it as much in growing as in fruiting.

As to cultivation in the spring, I am utterly averse to it. In our climate the roots are growing all winter. Why mutilate and disturb them in the spring? The final act of culture is the putting on of the mulch in autumn, except to cut out trespassing weeds with the knives in spring. I do not subsoil but plow about ten inches deep. The subsoil is quite penetrable by roots. The best mulch I have found is sorghum fibre-bagasse. If I could obtain it in quantity I should use no other. In cultivating the strawberry I use common five-tooth cultivators made with light teeth, hoes, and a runner cutter, which is simply two rolling cutters attached to an axle two feet in length, with a suitable draft beam. This is to be run as often as the runners begin to reach freely into the middle. As to fertilizers, I use wood ashes as far as practicable, and have also found castor bean pomace useful on warm clay lands. Of the latter 1000 pounds per acre is a good dressing. I cannot speak definitely of the value of phosphates, although others have used them with good effect. I have not found a remedy for white grubs when they are in the ground. Salt, so often recommended, has not the slightest effect unless it may increase their appetite. Mechanical killing is too slow. Don't use land recently in grass, yet you can never be sure you won't find grubs. The crown borer is doing more harm in southern Illinois than the grub.

Kitchen Garden—March.

As a rule, the early potato crop is much more reliable than the late, and therefore one feels more encouraged to take pains with it. There is supposed to be a decided advantage in using for sets single eyes cut deeply, and many will doubtless give this method a fair trial and report results, as Dr. Sturtevant is anxious they should. For the garden, I feel more and more inclined to practice close planting and level culture. Rows two and a-half feet apart and sets one foot apart are ample distances. Planted thus there will be little or no waste in manuring broadcast. Turn down the manure, smooth the ground, and open shallow drills, into which scatter some fertilizer, and plant, covering with the hoe. Peter Henderson strongly recommends the mixing of commercial manures with three times their bulk of leaf mould, muck or even good earth—all in a dry state—several months before using, the advantages in so doing being very apparent. Few persons, I presume, can get their season's supply so far ahead, but the plan may be worth imitating if the compost can be kept even a single month. It will certainly be easier to divide over a large surface, though that is but a secondary consideration.

All hardy vegetables should now be sown, beginning with peas and onions. To raise onion sets sow thickly on good, rich land. This was the advice I got from a neighbor last year, and following it, I succeeded perfectly, although I had tried year after year, on land rich and poor and in every way I could think of, and all in vain; so I concluded that the latitude in which the seed was grown or other unknown cause had something to do with repeated failures. In raising carrots, it will be found a good plan to avoid stable manure altogether, on account of the weed seeds which it contains. Tomatoes raised in boxes in the greenhouse will now be transplanted into a slight hotbed, and whoever has the advantage of a greenhouse will find this method better than sowing in the frame. Cabbage plants in frames will soon be set out and their places may be occupied by the tomatoes.

It should be known by this time what

crops are to be raised in the garden and where each separate article is to stand. Towards the end of the month set out a new strawberry bed and make it a point to do so every spring. No single sort will give satisfaction every year, so it is best to have several. Neither is it a good plan to discard one kind rashly on a single trial. The *Sharpless* did poorly with me at first, but last year it excelled any strawberry I ever saw in size and productiveness.

Rhubarb and asparagus should receive heavy dressings of stable manure. Lift horse radish and re-set the side shoots in a fresh bed after trimming them a little.

In the cottage flower garden, hardy perennials are coming more into fashion, and deservedly so. The seeds of many kinds can be got very cheaply and those which did not come true from seeds can be had by root division. The various lilies come under this head, and have the advantage that money spent on them is not thrown away, as it almost seems to be on many kinds of bedding plants that cannot stand a cold breath. I notice in some of the catalogues one hundred varieties of biennials and perennials for $4.00, which is an incomparably better bargain than the offer of thirty shades of coleus for the same money. Those, however, who are not skilled in raising plants from very fine seeds had better buy the plants.

Another year's experience with celery convinces me that the various methods of keeping it through the winter have each their advantages and disadvantages, and he does best who does not depend altogether on any one in particular;—but I prefer to discuss the matter in my next.

JOHN WATSON.

Early Peas.

There are two distinct classes of peas; those with small round seeds, the others with much larger, irregularly shaped peas, the surface of which is wrinkled. The wrinkled seeded, or marrow peas, are as much better than the other as sweet corn is superior to field corn. The round peas while not so good, are much hardier and earlier than the others. Unless the soil is warm, and they germinate quickly, wrinkled peas will decay before they can come up. The round pea is vastly better than no peas and are very acceptible until the others come. To have early peas, they must be sown early—the earlier the better. After the soil has thawed for the first four inches, even if is solid below, sow peas. If the ground was manured and plowed last autumn, all the better; if not, select the richest available spot, and open a drill four inches deep. Peas should be covered deeper than most other seeds. For varieties, the "Early Kent" is one of the best; it has almost as many names as there are dealers. "Daniel O'Rourke" is one of the names of a good strain of this pea. "Carter's First Crop" is another good variety, and every spring new extra early sort are sent from England, which usually turn out to be the old "Early Kent" with a new name. The peas should be sown in the bottom of the drill rather thickly, at least one every inch, and at first covered with about an inch of soil. It is well to put about four inches of coarse stable manure over the rows; this is to be left on in cold days, but when it is sunny and warm, pull it off with the rake, and let the sun strike the soil over the peas, replacing it at night. When the peas sprout, gradually cover them with fine warm soil, placing the coarse manure over them as needed, until the covering of soil reaches the level of the surface. If a ridge of soil, a few inches higher than the peas, be drawn up on on each side of the row, it will greatly protect them from cold winds. When the plants are a few inches high, draw some fine soil up to them, and stick in the brush. When the soil becomes dry and warm, the main crop of wrinkled peas may be sown.—*Agriculturist.*

The Grange.

National Lecturer's Communication.

SUBJECT FOR SUBORDINATE GRANGES FOR MARCH.

Question—Co-operation, in its general use?

Suggestions—Co-operation is not of self or for self, but by the many and for the general good. It requires a certain number to organize a Grange, and by the co operation of these, their organized effort leads to success. If they fail in co-operative effort, failure of the Grange is the inevitable result. And so it is with all organizations, and the success of each depends upon their co-operative work after organization. By co-operation we unite our membership as of one body, combine our influence, consolidate our strength, and when so united our strength and influence becomes a power to be exerted for good in every way it is properly applied.

If we consolidate our capital, bulk orders for supplies of any kind, and order ourselves or through trustworthy agents direct from manufacturers or wholesale dealers, a large per cent. as retail profits can be saved to the co-operators. If we consolidate capital, form a co-operative association for dealing in supplies—as a co-operative store—we secure to the co-operators the profits of trade. By uniting in the consideration and discussion of questions pertaining to our interest and welfare, then we co-operate in Grange work to educate each other, to realize our true condition as farmers and as citizens, as well as our rights, privileges and duty. Co-operation correctly understood and properly employed will secure statesmen for legislators, and the demands then made for justice and reform will not, as now, be trifled with.

Maryland Granges.

SUMMIT, No. 164, Baltimore county, has installed for the ensuing year the following officers: M., G. M. Fultz; O., J. B. Hampsher; St., J. W. Cooper; L., M. Alban; A. St., J. E. Bull; C., V. McCullough; T., W. McCullough; Sy., G. D. Owings; G. K., J. O. Michaels; Ceres, Mrs. S. J. Fultz; P., Mrs. C. Hampsher; F., Mrs. Mary Bull; L. A. S., Miss S. McCullough.

Baltimore County Grange

Will hold its regular quarterly meeting on Wednesday, March 21st, at 10 A. M., in the hall of Locust Grove, No. 173, on the Philadelphia turnpike, six miles from Baltimore, and near Stemmer's Run Station, where wagons will meet visitors.

Delegates will bring their own baskets, and a joint lunch will be served about noon.

The following questions are set for discussion, the public being invited:

Subjects of Discussion—The advantages and disadvantages of top-dressing wheat in the spring with phosphates or otherwise.

2. The best top-dressing and time to apply on grass.

3. The best time to sow clover-seed.

4. The propriety of the establishment of an experimental station for Maryland in Baltimore county.

5. The best paying fruits in the vicinity of Baltimore and manner of cultivation.

6. The best paying potato in our market and time and mode of cultivation.

ONE disadvantage about keeping a canary bird in the sitting room is, as everybody knows, his disposition to scatter seed in every direction. A simple contrivance will do away with this objection. If the cage is one of of the pretty gilded ones, take a piece of tarletan the same color; have it deep enough to reach from the bottom of the cage up to the top of the seed-fish; shir it at both top and bottom, run strings in, and fasten to the cage. If this is neatly put on, it does not detract from the good looks of the cage, and saves a good deal of work. Tie the strings so that they can be untied easily; and the cover be taken off and shaken.

Home Department.

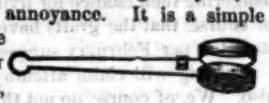
Household Conveniences.

The ingenuity of man is exercised from one end of the civilized world to the other in the interests of comfort and convenience; as well for the household as for scientific and other more general purposes. Our government provides the inducements and methods by which the inventors or discoverers of valuable principles bearing upon things promising to be of universal use or help, may be suitably rewarded for the benefit conferred, and the results given to those it is calculated to advantage.

Notwithstanding these provisions, there are no doubt, among the vast accumulation at the patent office, more good things that never go any farther, than there are of those that find their way into general use. Of the small proportion that get far enough to commend themselves to the enterprising manufacturer, there is again only a portion that ever gets beyond the warehouse. This is more especially the case with small things which cost little to manufacture, and from a man's standpoint, do not promise enough to justify any expensive mode of advertising. Of this class are many things which would be great helps, in making house-work easy and much of it less repulsive, but which fail to reach the housekeepers, and they ignorantly go on working to a disadvantage, often wishing for just such things as are lying idly, almost within reach, upon the merchant's shelves.

A visit of an hour or two in any of our house furnishing stores, will be sure to reveal to us something new and useful in this line, frequently too, so inexpensive that no one who has use for them need be without them. I never leave one of those houses without buying something not on my memoranda, if I have any spare change with me.

Upon my last visit to the city, my eye was caught by a trifle of this order, which for the small sum of ten cents, is likely to save me many times its cost during the year, as well as much annoyance. It is a simple holder for the soap we use for dish-washing, made something like an old-fashioned sugar tongs. A stiff wire is bent to form the long flexible handle, and on each of the two ends is a small seive of woven wire, in which the soap is held, by closing them, and a clamp on the handle holds them together. Any one who has always been in the habit of using a fork for this purpose, often breaking the soap in half, or else having the soap slip away as soon as the fork became heated, and elude the chase for it until much more had gone into the dish water than was needed, finally to be recovered in a shapeless, unmanageable mass, will not fail to appreciate the little convenience. The long handle enables one to move the soap about quickly in the hottest of the water and withdrawing it at the right time, to hang it up on a convenient nail where it soon dries, having both sides so open as to give the air free circulation.



A SOAP HOLDER.

Another convenience which is not patented nor belonging to house furnishing stores, but one easily manufactured at home, and very handy to have, is a broom cover, not to save the broom but to enhance its usefulness. I have always made use of the broom in a similar manner by pinning dusting towels around it to wipe the walls down, but I had to learn from an observing gentleman friend the value of a bag for the purpose, he having seen it elsewhere in use. Of course every housewife well knows what materials are best and most available for the various uses the covered broom may be put to, but for most purposes I find old flannel best. Of course they wear out fast, especially when used to dust bare floors, for which they are excellent, but they are easily patched, and the more they are mended in that way the better they become.

CERES.

Domestic Hints.

[Selected.]

BAKING-PLATES and pudding-dishes that have been used for a long time need a thorough cleansing occasionally. To do this, put them in a kettle of water in which you have put a spoonful of wood ashes to one quart of water. Let them boil in this for an hour, and if any grease has been absorbed through cracks in the glazing, it will be removed; and pie-crust baked on a plate thus cleened will be sweet and not unwholesome.

IF you heat the gridiron before putting meat on it to broil, you will find it an improvement over the usual way of putting it on cold.

PLAIN linen carriage robes, which are both useful and ornamental, can be made at home. Finish them around the edge with a hem about two inches wide; in one corner embroider the owner's monogram and in another a spray of golden rod, with poppies, in Kensington stitch.

A PRETTY and useful rug can be made of a piece of stair carpet. Put fringe on each end. Often when the stair-carpet is so much worn that a new one is necessary there will be a yard or more that is good enough to use for the rug. If you choose, you can put the fringe all around it.

WHEN you are cooking fish do not leave it lying in the pot in which it is fried after it is done. It will absorb the fat and the delicate flavor will be destroyed. Be sure that it is done and then remove it at once to a platter. People who say that they cannot eat fish, on account of its oily, indigestible qualities, do not know that in many cases it is not the fish that is to be blamed for this but the careless cook, who allows it to spoil after it is cooked.

MALARIA.—The worst forms of malaria are found in our close bed-rooms, our filthy back yards, stables, sinks, drains, etc. We make the worst climate known in ordinary society. Our *habits* produce more disease than ordinary malaria.

HOW TO COOK BEEFSTEAK.—Sometime since a complete encyclopedia of useful knowledge, in human form, became an inmate of a family. When this learned guest came among them, he was constituted as an oracle in many cases, and was asked one morning, "Would he tell or show them a better way to cook the steak for breakfast?" He took the thin, long-handled frying-pan from its nail, and, putting it on the stove, heated it quite hot. In this he put the piece of steak previously pounded, but to their surprise, did not put a particle of butter into the frying-pan, and did not salt the steak. He allowed the steak to merely glaze over, and then turned it quickly to the other side, turning it several times in this manner until it was done. Four minutes were not employed in the operation, but a juicier steak was never eaten. It was, when done, laid on a platter, previously warmed, and was buttered and salted, and set a moment in a hot oven. Allowing the steak to heat but a moment on each side, helped it to retain all its sweet juices, and putting the salt on the last moment, after it was on the platter, drew out its juices.—*Ex.*

FOR keeping the door open, place a brick neatly covered with a piece of carpet against the door.

The *Warren Virginia Sentinel* says: "From a careful perusal of its pages during several successive years, we have no hesitation in saying that the AMERICAN FARMER stands at the head of Agricultural Journals."

The American Farmer

"O FORTUNATOS NIMIUM SUA SI BONA NORINT "AGRICOLAS." . . . . . *Virg.*

PUBLISHED ON THE 1ST AND 15TH OF EVERY MONTH,

By SAMUEL SANDS AND SON,

At No. 128 West Baltimore Street,

(Sign of the Golden Plow,)

BALTIMORE, MD.

WILLIAM B. SANDS, Proprietor.

SAMUEL SANDS, WM. B. SANDS, } Editors and Publishers.

Dr. THOMAS POLLARD, Associate Editor.

Richmond, Va., Office, 619 W. Main St.

SUBSCRIPTION:

$1.50 a year, in advance. Clubs of five or more will be supplied at $1 each.

ADVERTISING RATES:

	1 Time.	1 Mo.	2 Mo.	3 Mo.	6 Mo.	12 Mo.
1 Inch 12 lines	$1 25	$2.25	$4 00	$5.50	$9.00	$15.00

Liberal reductions will be made on larger advertisements. Advertisements to remain on outside page subject to special contract. Transient Advertisements payable in advance—all others quarterly. Advertisements should reach us by the 12th and 27th of the month, to secure insertion in the succeeding issue.

*** Subscribers who have minerals, ores, marls, fertilizing materials, or other substances, will be advised through our pages, by competent chemists, as to their composition, uses and value, by forwarding specimens to this office, *expressage or postage prepaid.* Questions as to application of chemical science to the practical arts will also be answered.

*** Persons desiring information or advice on diseases or injuries of domestic animals, will receive replies from a competent veterinary surgeon, by giving a plain statement of the symptoms, etc.

☞ At the office of THE AMERICAN FARMER are located the offices of the following organizations, of each of which its proprietor, Wm. B. Sands, is secretary:

Maryland Horticultural Society.
Maryland Dairymen s Association.
Maryland State Grange, P. of H.
Agricultural Society of Baltimore Co.

Also, of the **Maryland Poultry Club,** Thos. W. Hooper, Secretary.

BALTIMORE, MARCH 1, 1883.

WE appeal once more to our friends to do what they can, before the active operations of the farm absorb all their energies, to enlarge the circulation of the FARMER. We have had during the past month many tokens of its appreciation by its readers in the shape of renewals and enlarged clubs. May we not hope for a continuance of these, since the present is a very favorable season for adding to our lists? We renew our reference to the premium list and its offer of remuneration to those who will give us some little time and work.

The Baltimore County Farmers' Convention.

The papers read at this meeting deserve careful perusal, and their length should not deter any from carefully considering their contents. Dr. Elzey's is of peculiar value at this time, when the ablest scientific minds of the age are discussing the best means of the economical feeding of cattle to meet the demand upon us for meat. Mr. Massey's digression as to the needs and kind of an education for our future farmers is pertinent and eloquent, and Mr. Sanderson's paper is a practical one, suggestive and useful.

THE DUTCH FRIESIAN HERD BOOK ASSOCIATION met at Utica, New York, on February 21st. Dr. F. W. Patterson, of Baltimore County, read a paper on "The Cow of the Future," and at the election was made President of the Association.

A WELL displayed advertisement of the old established house of Baugh & Sons attracts notice to their "Special substitute for Peruvian Guano," the analysis of which is given, and which they offer at $38 per ton of 2,000 lbs.

The Pikesville Arsenal for an Agricultural Experiment Station.

The recommendation of the Farmers' Convention at Towsontown that this property should be appropriated for the uses of an Experiment Station is timely, pertinent and practical. It is centrally located, in a good farming country, and convenient of access; the buildings ample and substantially built and adaptable to such a purpose at small cost. If more land is needed it can readily be leased or rented. The choice of this site would anticipate the objection to such an institution that its first cost would be too great for the State to bear.

The first necessity of a Station is its accessible and convenient location; secondly, appropriate buildings. Both these are offered by the Arsenal site. The State could hardly refuse to grant it to an institution designed to promote the general welfare and to benefit every class of our people.

The People's Live Stock Mutual Insurance Company.

We call attention to the first annual report of this corporation to the Insurance Commissioner of Maryland, which will be found in our advertising columns, and from which it will be seen that the year's business of the company according to the sworn statement of its officers has been eminently successful. They report about 3,500 policies in force, covering stock estimated to be valued at nearly a half million of dollars; total receipts for the year $16,777.15, and total resources, including the assessable liability of policy holders, $53,707.86. All its losses have been promptly paid, many of them before maturity.

More Polled Angus Cattle for Baltimore County.

Mr. Wm. H. Whitridge has succeeded in securing from the celebrated Ballindalloch herd of Sir George Macpherson Grant, two heifers of the prized Erica and Pride families. The Erica heifer Ethylene 4674, is out of Eveline, by Justice, and is a granddaughter of Eva 984. The Pride heifer Katinka 4669 is out of Kindness by Young Viscount, has a heifer calf by her side, and as well as Ethylene, is again in calf. The prices paid were the highest ever given at private sale. These accessions to Mr. Whitridge's herd give him notably fine specimens of the two most fashionable families of the breed.

The Agricultural College Presidency.

The report given to the press of the vote of the Trustees at their last meeting, and referred to in our issue of February 15th, is now said to have been the result of the first ballot only. On the third and last, Mr. Massey had four votes, Mr Smith four and Capt. McBlair, two. The meeting is reported to have been the largest since the Board was reorganized.

LANDSCAPE GARDENING.—Mr. William Fraser, long the Superintendent of Patterson Park in this city, and whose name will be recognized by our readers as an occasional correspondent of THE AMERICAN FARMER, announces in our advertising columns that he has established himself as a landscape gardener, and is prepared to undertake all kinds of work in that line, plant and maintain public and private places, etc. Mr. Fraser's experience will make his aid valuable to all wanting such work done.

THE article in our issue for February 15th, on "Tomatoes canned in 1882," was taken from the *Prairie Farmer*, but by inadvertence, not credited to that journal, which, in addition to the material it furnishes for home consumption always has something in its columns of interest to Eastern readers,

Received.

TREATISE AND HAND-BOOK OF ORANGE CULTURE IN FLORIDA, LOUISIANA AND CALIFORINA. By Rev. T. W. MOORE. Third Edition. E. P. Pelton & Co., N. Y. $1.50.

A perusal of this Hand-Book will show that the man who makes orange culture a success in Florida or elsewhere, is brother to him who has the patience, energy and vigilance to succeed anywhere with crops adapted to his surroundings. But, to one of the right stamp who is possessed of a moderate capital, orange growing in Florida presents a most inviting field of enterprise with comparatively few risks, and steady and ever increasing returns.

To one contemplating engaging in the business, Mr. Moore's book is nothing short of indispensable. It tells in plain language everything that is necessary to be known by the beginner, from the sowing of the seed or budding of the wild stock to the packing and shipping of the golden fruit. It embodies the results of the experience and observation not only of the author, but of the best orange growers of the land, and is written by one who has seen his own labors crowned with success.

Thoroughness at every stage is inculcated, and the promise of success conditioned thereon. Those who have watched the many contradictory reports concerning the soil and climate of Florida, will be pleased to hear from so reliable an author that neither the so-called "frost-line" nor the "orange-belt" have any real significance. Oranges will succeed in favorable locations all over the State, and there is no part of the State wholly exempt from frost. But neither frost, insects, nor increasing competition seem to discourage in the least those who have resolutely embarked in the business, and who are even now reaping the first fruits of a future big with promise.

WE CALL ATTENTION to the advertisement of the imported Percheron stallion, Sultan, which will make the season at Govanstown, Baltimore county, and whose services doubtless will be largely availed of by those who desire colts of such superior blood, Sultan being, it is probable, the best specimen of this race ever brought into the United States. Mr. Walters has recently refused for this stallion an offer of $3,000, concluding that it would now be impossible to replace him. Mr. Walters has recently sold the imported gray horse, Fandango, to J. H. Johnston, Loudon, Tennessee, for $1,900, and the magnificent imported black stallion, Black Prince, for $2,000 to Ezra Stetson & Sons, Neponset, Illinois.

The *Illustrated Champion*, the organ and gazette of the Champion Harvester machines, distributed by the hundred thousand by Messrs. L. H. Lee & Bro., of this city, and their related houses, contains this kind mention of the THE AMERICAN FARMER and its senior editor:

THE AMERICAN FARMER, of this city, like good liquor, grows better by age. If any one man in the country understands and appreciates Southern agriculture, that man is Col. Sands. With a paper covering sixty-four years of progress, a life long study of the people and their needs, a practical knowledge of scientific and profitable farming, a full appreciation of the arts and sciences of modern husbandry, he is, beyond any other of our pioneers, better fitted to occupy the position he holds in the hearts and homes of our farmers, that of the Father of Maryland Agriculture.

Berry Growers' Meeting.

A meeting of truckers and berry-growers of Anne Arundel counties were held in Baltimore on February 24th, to consider the subject of the losses of berry crates to growers. There was a good attendance, and much interest was shown. The following resolutions were adopted:

WHEREAS, The interests of berry-growers have suffered greatly in the past on account of crates, baskets, etc., necessary in handling a crop; and such losses have increased with the business from year to year with no sign of abatement; and many have become discouraged from berry-growing, thereby, we are desirous of seeking some remedy from the evil. We are convinced that there is no remedy except in united action in bringing about a different system in disposing of our berries. Other cities and communities have sought and obtained relief in the matter and system adopted to the satisfaction of all concerned, and we are convinced from a partial trial of the depcsit system of last season that it was a success as far as known, and are encouraged thereby to still more vigorously press the matter upon the notice of berry-growers to the mutual benefit of all. Therefore, at a meeting of berry-growers in session assembled in Baltimore, February 24, 1883, we submit the following resolutions:

Resolved, That we instruct our agents to require a deposit of $1.00 on each crate of berries sold, the said $1.00 to be security for the return of the crate, basket, etc., in *good order*. And we will furthermore hold our agents responsible after said instructions for all crates and baskets not so returned; and be it further

Resolved, That we respectfully request the co-operation of all berry-growers to unite with us in carrying out the aforesaid resolution.

The following concerning a wholesale produce market was also adopted:

Resolved, That we heartily endorse the movement to have the lower end of the Central (Marsh) Market set apart for the purpose of a wholesale market for vegetables and fruit.

The meeting then adjourned to meet on April 7th in Baltimore. The co-operation of berry-growers generally is requested.

PURCHASE OF KENTUCKY HORSES.—Mr. E. B. Emory, of Centreville, Md., purchased at the sale by Col. R. G. Stoner, Paris, Kentucky, on February 20, the following:

Mollie Goldsmith, brown filly, foaled 1879, by Volunteer Goldsmith, son of Goldsmith, son of Rysdyk's Hambletonian; dam Molly, by a Morgan horse called Bradford's Telegraph.

Avonmore, bay colt, foaled 1881, by Strathmore; dam Ariline, by Almont.

Volunteer Belle, brown filly, foaled 1882, by Goldsmith; dam Volunteer; dam Volunteer Maid, by Volunreer.

Belton, bay colt, foaled, 1882, by Belmont, sire of Nutwood, 2.18¼; dam Sallie D. by Strathmore, foaled 1880, by Lexington.

Glucose—What is It?

When we receive a large number of inquiries on an unusual subject, we feel sure that some article of "newspaper science" is going the rounds. We have not seen the article, but as one inquirer asks, "What articles of food are adulterated with it? Is it wholesome or otherwise?" it is no doubt alarming. The term dextrose is now preferred by scientific men to glucose, but we will use the old name—grape sugar. It is a form of sugar that exists in various fruits, being often found upon old raisins, and is made artificially. It may be made from saw-dust, cotton, or other form of vegetable fibre, but starch is the material generally used in its manufacture. When starch is boiled for several hours in weak sulphuric acid (oil of vitriol) it is converted into grape sugar, while the acid remains unchanged, and is removed by adding some form of carbonate of lime to neutralize it. The grape sugar is obtained on evaporating the liquid. It is sometimes in crystals, but usually as a thick syrup. Any form of starch may be used; in this country it is the starch of Indian corn, while in Europe it is usually potato starch. It differs from cane sugar (produced also by the beet, some of the sorghums, and sugar maple) in having less than half the sweetening power. It is said to be used in Europe to adulterate the common sugars, but in this country, where such sugars are little used, it is more likely to be mixed with syrup. It is easily detected by the chemist, but for others, its lack of sweetness is the test.—*American Agriculturalist.*

Agriculture in the South—Its Needs and Opportunities.

By Thomas Pollard, Ex-Commissioner of Agriculture of Virginia.

In our last we were speaking of the opportunities more particularly of Virginia, and were discussing its admirable climate. The same remarks will apply in a good measure to Maryland and North Carolina, remembering that Maryland is further north than Virginia and consequently colder; but the climate will produce anything that grows in Virginia except cotton, which is cultivated in the Southside counties of Tidewater and some few bordering on them to the West. Last year the cotton crop of Virginia was estimated at 24,000 bales, and, remembering that North Carolina is further south than Virginia and consequently has a milder climate, particularly in winter, North Carolina, from its position, produces largely of cotton, produces earlier vegetables than we can do and raises some fruits which we cannot raise, notably the Scuppernong grape, which flourishes there and bears in great profusion, being a great acquisition to the State. The climate of a country has much to do with its *health*, and health is particularly important for farmers and their employes. Sickness sometimes prevails on farms almost sufficiently to stop farming operations in a busy season. The general average health of Virginia is without doubt good. This is universally conceded for "Middle Virginia," which has all the requisites to constitute a healthy region—equable temperature, rolling, well-drained country, well watered with a bountiful supply of good springs. It is rare that we have the temperature in this region above 90 degrees in summer and lower than 5 or 8 degrees in winter, rarely reaching zero. This part of the State is removed from the malarial influences of Tidewater, except occasionally in the lower tier of counties, and from the colder and comparatively damper climate of Piedmont, the Valley and mountain regions. The diseases which prevail in Middle Virginia are very rarely such as are supposed to be of any local origin or climatic influence, but as it were of accidental occurrence or old age, being usually in the first case the result of improper exposure, imprudent dieting or hereditary complications. That the health of Piedmont and the Valley and the mountain regions is accepted in popular estimation is attested by the number of persons who seek all this region in search of health—not only from our State, but from the Southern, Northern and Western States, and even from Europe, in the summer and early fall months. In the winter the minimum of cold is lower than in the other divisions of the State and the climate damper, with longer winters; and more protection and warmer clothing is required than in the other portions of Virginia. But we find this region inhabited by a very hardy race—robust, ruddy and long-lived.

It remains to speak of the healthfulness of "Tidewater," which, as we have said, has suffered unduly in popular estimation on account of *malaria*, which prevails there in some seasons and in some years, sometimes four or five years elapsing without any malarial disease—and, indeed, it is said that ten years has elapsed without the appearance of any ague and bilious fever. This period is said to have existed from 1832 to 1842. Such is the testimony of Dr. Henry Curtis, a prominent physician of Tidewater at that period. When it does occur it is not usually for a longer period than a month or six weeks, generally from the 1st of September till decided frost, which often occurs by the middle of October. In more unfavorable seasons it may be prolonged for eight weeks. *Having practiced medicine in Tidewater for ten years, I do not hesitate to express the opinion that the gravity of ague and fever has been much overestimated.* These ten years happened to be at a period when these diseases prevailed quite frequently, and in some of the years quite extensively. In this period, with quite a large practice, I saw but one death from malarial disease (ague and bilious fever) and that was of congestive form in a constitution broken down by liquor. In one of these years there was a good deal of malarial disease. This congestive form is rarely seen in Virginia. Even before the use of quinine ague and bilious fever was rarely fatal. Having been raised on a farm in Tidewater, with a large white and black family, and under the old "*regime*" of "Peruvian Bark," it is a well-remembered fact in the history of this family that there was not more than one, possibly two, deaths from these diseases, or, I should say, this disease, for they are one. With quinine, properly used, there would have been, in all probability, none. Objectionable as the bark was in some respects, it would have been more efficient if the doctors had known how to use it, which they did not. This disease is less to be feared from the fact that it is in many cases preventible. Avoidance of night air and the use of a few grains of quinine—say three or four grains—every morning will generally prevent it. Mr. Hill Carter, of Shirley, on the James river, thought he kept off chills for thirty years by taking two grains of quinine every morning. Some time before the war a gentleman of South Carolina, against the persuasion of his friends, purchased a plantation near the coast, for the purpose of raising cotton, the place having a reputation of being very sickly. After a series of years he gave his experience about the sickness on his farm, which was published in one of the medical journals. He enforced strict orders that none of his hands or his family should go out in the fall until after sunrise, and should come in at sunset during what had been called the sickly season, and the result was almost entire immunity from ague and bilious fever. We mention these facts to show how over-rated is the gravity of malarial diseases and unfounded the popular impression which prevails in other sections regarding the sickliness of Tidewater Virginia, and no doubt the same impression prevails regarding the Eastern Shore of Maryland and the eastern portion of North Carolina. Another fact is that Richmond is in the malarial region, and has some of this disease whenever it is prevalent, yet this city compares favorably in health with other cities which are ranked as very healthy. Persons will seek a residence in Richmond, while they doubt about living in Tidewater, for fear of "chills and fever." This malady, while objectionable, as all diseases are, is so amenable to quinine—which is almost a perfect antidote to it—that it ceases to be formidable. There is another disease much more so, viz., typhoid fever, which is much less frequent in Tidewater than in the western portion of the State; and it is a fact that malarial regions suffer much less from typhoid fever than non-malarial regions. Up to 1851 typhoid fever was, to my personal observation, scarcely known in Tidewater. During a practice there of ten years, up to 1851, I had never seen a case of typhoid fever. When it occurs there now medical men say it is of a milder type than in the mountain regions. Malarial disease is believed now to be less frequent than formerly, owing probably to the use of marl and lime. We believe that if the facts were known, less mortality can be found in Tidewater than in Western Virginia, and as much longevity.

I am fully aware that Middle Virginia, Piedmont and the Valley can take care of themselves in popular estimation as regards health, but I consider it my duty, on all proper occasions, to attempt to disabuse the popular mind against the prejudice it entertains against the health of Tidewater.

As we have said, the productions of Virginia are numerous and varied, but still there is an opportunity of adding to the productions and of increasing to their variety. Our corn crop, by census of 1880, amounted to 29,106,661 bushels, our oat crop to 5,333,181 and our wheat crop to 7,831,504. We have not seen the returns for tobacco and cotton. There are many other industries which might be profitably prosecuted in Virginia. Butter and cheese may be produced as cheaply in Virginia as in almost any other portion of the world, but do not receive the attention they deserve. Cheese is but little made in Virginia, and, we suppose, not enough butter to supply the home demand; and that produced is mostly of inferior quality. There is great room for increasing the "trucking" business, as we have access now from Tidewater to the large markets of the West by rapid railroad transportation. The raising of peanuts might be largely increased in this region. It is already quite an important and decidedly a profitable crop. The production of sumac might be largely increased. Bees do remarkably well in Virginia, on account of the long summers and mild winters, with moderate rainfall and the abundance of wild flowers and clovers, cultivated and uncultivated. White clover, the greatest honey producer, is indigenous to all parts of the State. Wild fruits abound in all sections of the State, as blackberries, strawberries, whortleberries, persimmons, plums, cherries and cranberries, and various nuts—walnuts, hickory-nuts, chestnuts, filberts—are plentiful in many portions.

The *soil* of Virginia is very varied, but for the most part, good. In the western portion of the State the soil is generally reddish or chocolate clay, and capable of being made to produce heavy crops. This, *par excellence*, is the grass region of Virginia. Its cultivation is more difficult and expensive than that in other portions of the State. The soil of Middle Virginia is grayish, with generally a red clay subsoil. Much of this land, too, is capable of high production. That on the numerous rivers and smaller streams which intersect this region is already rich. Much of this land has been greatly injured by injudicious cultivation, particularly by indiscreet plowing, which has left many galls and scars to disfigure the lands; but the farmers need only a little perseverance and judgment to reclaim their farms in this region and make them profitable. This can to a great degree be effected by turning under green crops and by liming where it is practicable. This Middle region can be made to produce excellent clover and the various grasses. This, as well as the whole of the State, is admirably watered.

The soil of Tidewater is, on the high lands, of very light character, especially as you approach the Bay. That on the streams is not so light and is very productive. Still, some of these high lands are made to produce excellent crops of clover, principally by the use of marl, which is very abundant in the upper portion of this region. Travelling last fall past "The Seven Pines" (noted as one of the great battle fields in our late war), we saw as fine clover as can be seen almost anywhere. This is seven miles below Richmond. On the Pamunkey, twenty miles below Richmond, on the farm of Mr. John B. Davis, we have seen fields of very excellent clover. This is the "trucking" region of Virginia, which requires very light lands, more or less sandy, and there is no locality that we know of better adapted to this business. The access to markets for Tidewater is unsurpassed.

He that wrestles with us strengthens our nerves and sharpens our skill. Our antagonist is our helper. This amiable conflict with difficulty forces upon us an intimate acquaintance with our object, and compels us to consider it in all its relations. It will not suffer us to be superficial.

Carbonate of Lime.

The great mineral fertilizer. Read the testimonial from

Ashville, N. C., Feb. 5, 1883.

Dear Sir: I used your carbonate of lime for corn, wheat and potatoes, and am satisfied that it is the cheapest and best "plant food" that I ever used. I applied it in a field of corn alongside of high grade, acidulated South Carolina Rock. The corn was fully a fourth better where the carb of lime was used (which my neighbors will testify to) and at half the cost per acre.

My wheat is standing the winter quite as well with it as where I used phosphate and manure. I shall want about 15 tons of it this spring.

Yours, truly,

B. F. Taylor.

For further particulars and treatise write to Wm. Wirt Clarke and Son, Baltimore.

To poison a well is one of the worst of crimes. It is worse to poison the fountain of life for one's self and for posterity. Often by carelessness, or misfortune, or inheritance this has been done. Ayer's Sarsaparilla goes back of the symptoms, picks up these impure seeds from the blood, the vital stream, and restores appetite, strength and health. *

Clergymen, lawyers, public speakers, and singers, confirm the opinion of the general public in regard to Ayer's Cherry Pectoral. All say it is the best remedy that can be procured for all affections of the vocal organs, throat and lungs. *

All that can be supplied towards making the natural hair beautiful and abundant is contained in Ayer's Hair Vigor. It keeps the scalp free from dandruff, prevents the hair from becoming dry and harsh, and makes it flexible and glossy. It stimulates the roots to healthy action, and promotes a healthy, vigorous growth. *

A coated tongue, with headache, bad taste in the mouth, a dull, drowsy feeling, are sure indications that your liver is torpid and that there is a collection of foul humor in the stomach. J. M. Laroque's Anti-Bilious Bitters quickly and effectually correct these evils. 25 cents a paper and $1 a bottle. W. E. Thornton, Baltimore and Harrison streets. *

Hope for Drunkards.

My husband had drunken habits he could not overcome until Parker's Ginger Tonic took away his thirst for stimulants, restored his energy of mind and gave him strength to attend to business.—Cincinnati Lady. *

A Vigorous Growth

Of the hair is often promoted by using Parker's Hair Balsam. It restores the youthful color and lustre to gray hair, gives it new life and removes all dandruff. *

A Peerless Perfume.

The refreshing aroma of Floreston Cologne, and its lasting fragrance makes it a peerless toilet perfume. *

Baltimore Markets, March 1.

Flour.—Quiet and steady. We quote as follows: Howard St. Super $3 50@4.25; do. Extra $4.37@5.55; do. Family $5 25@6.25; Western Super $3 50@4.87; do. Extra $4.50@5.15; do. Family $5.38@6.25; City Mills Super $3.75@4.50; do. Extra, $4.62@5 25; do. (Rio Brands) Extra, $6 25@6.50; Fine $3 00@3.50; Rye Flour $4@4 25; Baltimore Pearl Hominy $4; do do. do. Grits $4.25; do. do. do. Chop $1 10; Corn Meal per 100 lbs. $1.40.

Wheat.—Quiet and firm. We quote as follows: Spot $1.21¼@1.21½; April $1.23⅜@1.23¼; May $1.25¼@1.25⅝; Southern Fultz $1 25@1.23; Southern long-berry $1.22@1.23.

Corn.—Dull and prices higher. We quote: Spot 69⅜@69¾; March 69¾@69¾; April 69¾@70; May 70¼@70⅝; Southern white 69@69; Southern yellow 69@69 cts.

Oats.—Firm in tone, with a very steady demand. We quote: Western mixed 49@51 cts.; do. white 51@54 cts.; Pennsylvania 50@54 cts.; Maryland and Virginia 50@54 cts.

Rye.—Firm and good to prime samples of Maryland and Pennsylvania are quoted at 73@75 cts.

Seeds.—The trade is moderate and is mostly confined to small lots. The range of Clover is 12¾@13¼ cts per pound for good to prime, and 14 cts. for choice, and jobbing lots ¼ cent higher.

Mill Feed.—The demand is regular and the market is fairly steady at $20@22 per ton for City Mills and $18.50@19 for Western, the latter for bright Middlings.

Hay and Straw.—The receipts of Hay are ample and the market is steady for good and dull for common. Straw is easy. We quote baled Hay as follows: Cecil county Timothy $17@19; Maryland and Pennsylvania $13@16; New York and Western $11@13 for common to fair, and $14@16 for good to prime, mixed $11@12 per ton. Straw is quoted at 8@9 for Wheat; $10@11 for Oat; $10¼@11¼ for long Rye, and $10 for short do.

Provisions.—*Hog Products.*—Firm and active. We quote packed lots as follows: Bulk shoulders, packed, 8¼c.; bulk long clear sides 10¼c.; bulk clear rib sides 10¾c.; bacon shoulders 9¾c.; Bacon clear rib sides 11¾c.; hams, sugar cured, 14@15; shoulders,

do. 10c.; breasts, do, 12c.; lard, refined, tierces 12¼c.; Pork, mess, $20.

Dressed Hogs.—Firm, with a brisk demand at $8 50@9 per 100 lbs, the latter for choice light weights.

Butter.—For choice fresh table stock the market is steady, but the medium and lower grades very dull. We quote: New-York State choice 30@33 cts Creamery fancy 35@38 cts.; do prime to choice 33@34 cts; Western Reserve choice 22@23 cts.; do. do. good to prime 19@21 cts.; Southern Ohio and West Virginia choice 20@21 cts.; do. do. do. fair to prime 16@19; Western Rolls, choice to fancy, 21@24 cts.; do. do. fair to prime 17@20 cts., and near-by receipts 18@22 cts. per lb.

Cheese.—Prices are about steady. New York State is quoted 13¼@14 cts. for fancy late made and 12¼@13 cts. for good to prime, and Western 13@13¼ cts. for choice and 12@12¼ cts. for good to prime; skims 9@9¼ cts. for prime; 8@8¼ cts. for fair to good, and 5@6 cts. for common.

Eggs.—Quiet and steady at 20@21 cts. per dozen for fresh lots.

Poultry.—Supply is light, and the market is almost nominal at 17@19 cts. per lb. for Turkeys undrawn, and 12@14 cts for Chickens, and 1@2 cts. higher for drawn.

Cotton.—The official quotations are as follows: Middling 10¼ cts; Strict Low Middling 9¾ cts.; Low Middling 9¼ cts.; Good Ordinary 8¾ cts.; Ordinary 8¼ cts.

Wool.—We quote: Wool, unwashed, 26@30 cts., tub-washed, 36@40 cts, Merino, washed, 35@38 cts., do unwashed, 23@27 cts. per pound.

Live Stock.—*Beef Cattle.*—Market slow. We quote: Very best on sale 6¼@6¾cts.; That generally rated first quality 4¾@5¾ cts.; Medium or good fair quality 4¼@4¾ cts.; Ordinary thin steers, oxen and cows 3@3¾ cts.; Extreme range of prices 3@6¾ cts; Most of the sales were from 4¼@6 cts. *Hogs.*—Prices show an advance on last week's figures. The offerings are generally reported as light, but about equal to a moderately fair demand at the advance in quotation. Prices of rough sows and stags 9@9¼ cts., and better grades 9¾@10, and extra Chicago hogs 10¼. *Sheep.*—The supply is reported light. The quality of the offerings generally is not as good as those of last week, excluding one car load of choice sheep. These were sold at the top figure, 7cts., and prices ranged down to 4½ cts., with most sales at 5@6¼ cts.

Tobacco.—*Leaf.*—Quiet and firm. We quote: Maryland inferior frosted $2 50@4 00; do. sound common $4.50@5.50; do. good common $5 50@6.50; do. middling $7.00@7.50; do good fine red $8.50@10 00; do. fancy $10.00@15 00; upper country $4 00@10.00; do. ground leaves $3 00@8.00.

GOOD

FERTILIZERS

For $12 a Farmer can buy a FORMULA (520 lbs) of POWELL'S

PREPARED CHEMICALS

This, when mixed at home, makes One Ton of SUPERIOR PHOSPHATE, equal in plant-life and as certain of successful crop-production as many high priced Phosphates.

NO EXTRA EXPENSE. { No trouble to mix. Full directions.

POWELL'S CHEMICALS have been thoroughly tried, give universal satisfaction, and we offer leading farmers in every State as reference. Send for Pamphlet. Beware of imitations.

Brown Chemical Co

SOLE PROPRIETORS,

Manufacturers of BALTIMORE, MD.

Powell's Tip Top Bone Fertilizer. Price only $35 a Ton, net cash.

Bone Meal. Dissolved Bone.

Potash. Ammonia.

And all high-grade Fertilizing Materials.

COTTON GRAIN AND TOBACCO VEGETABLES

1883.

PREMIUM LIST

— OF —

THE AMERICAN FARMER

Valuable Premiums to all who consume time or take trouble in enlarging its circulation for 1883.

TAKE NOTICE:

No special authority is required from us to enable any one to act as agent.

Send subscriptions as fast as received. Old and new names count the same, and they may be from different postoffices, but in every list sent for a premium it is expected that some shall be new names. *Send with each list the exact amount of money.*

Any list can be closed at any time and the premium desired will be forwarded; or additional names can be added up to May 1, 1883.

All premiums will be forwarded by express at the expense of the receiver, unless we state that they will be sent free by mail. Any article sent by mail will be registered on receipt by us of the registry fee of 10 cents.

☞SEND MONEY BY POSTAL MONEY ORDER, DRAFT OR CHECK, OR BY REGISTERED LETTER. Money sent by unregistered letter is at sender's risk.

PREMIUMS.

No. 1. Black Walnut Hand Stereoscope and six views. Price $1.50. We will furnish by mail, postage paid, for two subscribers at $1.50, or five at $1.00.

No. 2. Black Walnut Hand Stereoscope, with Tulip Wood Hood, (better lens than No. 1,) and six views. Price $1.75. We will send this by mail, postage paid, for three subscribers at $1.50, or six at $1.00

No. 3. Satin Wood Polished Hand Stereoscope, nickel trimmed, (fixed or folding,) and one dozen views. Price $3.00. We will send this for four subscribers at $1.50, or ten at $1.00. [This premium is a very handsome one, adapted for a present, and will be appreciated by any one of taste for art.]

No. 4. Photograph Album, Morocco covered, with clasp and ornamented sides, with places for twenty-four pieces. Price 65 cents. We will send this by mail, postage paid, to any present subscriber who will send one *new* one at $1.50.

No. 5. Photograph Album, Morocco, paneled sides, gilt edges, embossed, with places for forty pictures. Price $1.25. We will furnish this by mail for two subscribers at $1.50, or five (new and old) at $1.00.

No. 6. Photograph Album, Morocco, heavy beveled cover, embossed deep gilt edges, nickel clasp and hinged back, with places for fifty cards. Price $2.00. We will send this for three subscribers at $1.50, or eight at $1.00.

No. 7. One Hundred Plants of the Mount Vernon Strawberry.—This is one of the most promising of the newer varieties; a strong, healthy grower; enormously productive, and is said to have produced 300 bushels of fruit to the acre. It has the desirable quality of blossoming very late, thus escaping injury by late frosts, often so destructive. It is moderately firm and of a fine bright scarlet color and excellent quality. It is the berry for home consumption and for not too distant markets; averaging large in size, (which is kept up till end of season,) whilst the plant is free from blight and scald and remarkably prolific. It is identical with Kirkwood. It promises to become, uniting so many excellent qualities, one of the most popular sorts. For two subscribers at $1.50, or five at $1.00. Sent postage paid.

No. 8. One Hundred Plants of Miner's Great Prolific Strawberry.—This variety is of general excellence and adaptation to all circumstances. It is a superb berry, averaging very large, and uniform in size, continuing in bearing a long time. Its color is a deep crimson; flavor good; foliage clean, healthy and luxuriant. It is extremely productive. It has a glossy green cap which holds firmly even when full ripe. The berry is moderately firm and a tolerably good shipping sort. For two subscribers at $1.50, or five at $1.00. Sent postage paid.

No. 9. Twenty-five Plants of Queen of the Market (or Cuthbert) Raspberry. In no other variety are there so many good qualities combined. It is large in size, firm in texture, of a fine appearance and handsome red color, of strong vigorous growth of cane; hardy and remarkably productive. To all this must be added that wide trial shows it to succeed in every locality—to be of universal adaptation to all sections, situations and soils. For two subscribers at $1.50, or five at $1.00. Sent postage paid.

No. 10. The following Splendid Hardy Ornamental Flowering Shrubs:—
Hydrangea Paniculata Grandiflora.
Viburnum Plicatum.
Styrax Japonica.
These comprise the three most beautiful species of late introduction, and all should find a place in the garden or yard of every reader of the *American Farmer*, each being emphatically "a thing of beauty." Sent by mail, prepaid, for two subscriptions at $1.50, or five at $1.00.

No. 11. Handsome Gold Ring, Cameo Set, for lady or gent. Price $5.00. We will furnish this by mail, postage paid, for five subscribers at $1.50, or fifteen at $1.00.

No. 11 A. Elegant Gold Ring, Cameo and Pearl Set, for lady. Price $6.00. We will send this by mail, postage paid, for six subscribers at $1.50, or twenty at $1 00.

No. 12. Gent's Seal Ring.—Beautiful design. Price $12.00. For twelve subscribers at $1.50, or forty at $1.00.

No. 13. Gent's Double Curb Watch Chain.—*Rolled Plate;* tips of solid gold. Price $5.00. We will send this by mail for five subscribers at $1 50, or twelve at $1.00.

No. 14. Watch Chain, same as No. 18, but heavier. Price $6.00. We will send for six subscribers at $1.50, or sixteen at $1.00.

No. 15. Lady's Guard Chain.—*Rolled Plate.* Price $10.00. We will furnish this, by mail, postage paid, for ten subscribers, at $1.50, or thirty-six at $1.00.

No. 16. Lady's Guard Chain, same as No. 20, but heavier. Price $14.00. This we will send for fourteen subscribers at $1.50, or fifty at $1.00.

No. 22. Silver Open Face Lepine Watch.—Good time keeper. Price $9.00. We will give this watch for twelve subscribers at $1.50, or thirty-six at $1.00, by mail, postage paid.

No. 18. Silver Hunting Case Lepine Watch.—Smaller than No. 22. A good timepiece. Price $7.50. This watch we offer for ten subscribers at $1.50, or thirty at $1,00, and forward by mail, postage paid.

No. 19. Silver Open Face American Watch.—A good honest, low-priced watch. Price $11.00. We will give it for fifteen subscribers at $1.50, or forty at $1.00.

No. 20. Silver Hunting Case American Watch.—A serviceable cheap timekeeper. Price $12.00. We offer this watch, by mail, postage paid, for fifteen subscribers at $1.50, or forty at $1 00.

SILVER-PLATED WARE.

From an established and reputable manufacturer. Triple plated on white metal base. Not the cheap stuff which has flooded the market, but substantial and reliable goods. Warranted as to quality and wear.

No. 21. Table Service of Six Pieces.—Comprising tea, coffee and hot-water urns, cream pitcher, sugar and slop bowls. Neat style An admirable article. Price $42.00. We will send this service, by express, for forty subscribers at $1.50, or one hundred and ten at $1.00.

No. 22. Tete-a-tete Set of four Pieces.—A beautiful service. Price $24.00. By express for twenty-four subscribers at $1.50, or seventy-five at $1.00.

No. 23. Ice Water Pitcher.—Handsome style. Price $12.00. By express for twelve subscribers at $1.50, or forty at $1.00.

No. 24. Cake Basket.—Neat pattern. Price $6.00. By express for six subscribers at $1.50, or twenty at $1.00.

No. 25. Butter Dish.—Late style. Price $6.00. By express for six subscribers at $1.50, or twenty at $1.00.

No. 26. Pair Flower Vases.—Chaste pattern. Price $7.50. Sent by express for eight subscribers at $1,50, or twenty-five at $1.00.

No. 27. Child's Drinking Cup.—Price $3.00. By mail, postage paid, for four subscribers at $1.50, or ten at $1.00.

No. 28. Set of Six Napkin Rings.—Price $3 00. By mail, postage paid, for four subscribers at $1.50, or ten at $1.00.

No. 29. Pickle Castor, with two glass jars. Price $2.00. By express for three subscribers at $1.50, or six at $1.00.

No. 30. One Doz. S. P. Table Spoons.—Modern pattern. Price $7.50. By mail, postage paid, for eight subscribers at $1,50, or twenty-five at $1.00.

No. 31. One Doz. S. P. Medium Forks.—Modern pattern. Price $7.50. By mail for eight subscribers at $1.50, or twenty-five at $1.00.

No. 32. One Doz. S. P. Tea Spoons.—Price $4.00. By mail for four subscribers at $1.50, or fifteen at $1.00.

No. 33. Fruit Knife.—Price $1.50. By mail for two subscribers at $1.50, or five at $1.00.

No. 34. Child's Set, of knife, fork and spoon, in case. Price $3.00. By mail for four subscribers at $1.50, or ten at $1 00.

No. 35. Child's Set, on card. Not so good as No. 34. Price $1.50. By mail for two subscribers at $1.50, or five at $1.00.

No. 36. Pair Bangle Bracelets.—(Adjustable) New style. Price $12.00. By mail for twelve subscribers at $1.50, or forty at $1.00.

No. 37. Enameled Bracelet.—Very neat. Price $6.00. By mail for six subscribers at $1.50, or twenty at $1.00.

No. 38. Bell-Head Pencil.—*Rolled Plate.* Price $1.50. By mail for three subscribers at $1.50, or five at $1.00.

No. 39. Watch-Charm Pencil.—Price $1.25. By mail for three subscribers at $1.50, or five at $1.00.

No. 40. Remington Single Barrel Breech-Loading Gun.—Price $14.00. Weight 6½ pounds; sixteen guage, 32-inch plain but fine quality barrel; no ornamentation, but shoots as well as a high-priced gun, and can be loaded and fired very rapidly. Just the gun for a country youth. We will send this gun by express for fifteen subscribers, at $1.50, or forty-two at $1.00.

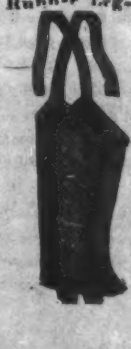
No. 41. Remington Double Barrel Breech-Loading Shot Gun.—This gun has rebounding locks, extension rib and patent fore end fastener; decarbonized steel barrels, 28 and 30 inch; 10 and 12 guage; weight 8 to 8½ pounds. This gun is one of the most approved makes, with many advantages peculiar to itself, and worthy the reputation of the house which produces it. No sportsman can afford to pass by this opportunity we here give of getting this excellent gun on the liberal terms we offer. This uses either paper or brass cartridges, which may be reloaded many times. With the gun we send 24 Remington Brass Solid-head Shells, with Primer Extractor and Re-primer, and 500 No. 1 Primers. Price of gun $40.00, extras $4.60, total $44.60. We will send this gun, by express, for fifty subscribers at $1.50, or one hundred at $1.00.

No. 42. Ladies Gossamer Rubber Waterproof Circular.—(With Hood.) Price $5.00. This is *best quality goods*, and a useful, indeed necessary, article for every country woman. It is so small in bulk and so light, it can be carried in the pocket. Each one is put up in a separate bag in which it can be mailed. The circulars range in length from 50 to 60 inches, and in ordering give length desired from the neck to the hem of the dress. We will send one of these, of any size, by mail, postage paid, for five subscribers at $1.50, or fifteen at $1.00.

No. 43. Ladies Gossamer Newport Waterproof.—Price $6.00. This is similar in shape to the circular, but has a cape surrounding the upper part of the body, and with the advantage of affording complete protection to the arms without impeding their freedom. The cape is also arranged to button and form a sleeve. *Best quality.* Sizes from 50 to 60 inches. We will give one of these in a pouch, free by mail, for six subscribers at $1.50, or sixteen at $1.00.

No. 44. Gentlemen's Gossamer Rubber Sack Coat.—Price $6.00. This is the *best quality* goods, made extra long, loose fitting, with sleeves lapping over at the wrist, affording the most perfect protection to the entire person. Very light, weighing little over one pound. A necessity for every one exposed to the weather on the farm or road. Secure one by any effort. We will give one, sent prepaid in a pouch, for six subscribers at $1.50, or sixteen at $1.00. Give breast measure—sizes run from 36 to 50 inches.

No. 45. Men's Gossamer Rubber Leggins.—Price $1.50. A great protection, almost indispensable for wet weather and muddy roads. They are unlined and are large enough to draw on over pants and boots, and fasten by a strap to the suspender buttons. They are very light and readily carried in the pocket. We can supply small, large or medium sizes. We will forward a pair for two subscribers at $1.50, or five at $1.00.



CARBONATE OF LIME

KAINIT, Or German Salts of Potash.

U. S. Fine Ground **GYPSUM.**

GROUND BONE, (Slaughter House.)

PERUVIAN GUANO.

SEND FOR TREATISE ON ABOVE.

CEMENTS

FOR SILOS, CISTERNS, &c,

Direct Importations of Foreign Portland Cements. Send for Treatise on Cements, how to use them, etc.,

WM. WIRT CLARK & SON,

Importers and Receivers,

61 S. GAY STREET, Baltimore, Nd.

FIRST ANNUAL REPORT

OF THE

PEOPLE'S MUTUAL LIVE STOCK INSURANCE COMPANY.

OF BALTIMORE CITY, MD.

FOR THE YEAR ENDING JANUARY 19, 1883

Policies issued during the year		3,619
Number Policies lapsed	141	
" " expired	26	
		167
" " in force		3,452
Number Policies written for 3 years, now in force		2,573
Number Policies written for 2 years, now in force		252
Number Policies written for 1 year, now in force		627
Estimated value of Stock insured		$491,607 00
Insurable " " " "		368,705 00

CASH RECEIVED.

Total amount		$17,777 15
Viz:—Premiums	$9,481 62	
Policy Fees	1,283 00	
Transfer Fees	26 55	
Assessments	5,372 99	
All other receipts	610 08	

CASH DISBURSED.

Expenses (Office Rent, Salaries of Officers, Clerk Hire, Postage, Printing, Stationery, Gas, Fuel, Licenses, Advertising, Travelling Expenses, &c., &c.	$4,052 21
Agents' Commissions	4,348 04
Inspection of Stock	934 50
Medical attendance to Stock	120 00
Establishing Agencies	350 00
Death Losses Paid	5,793 00
Cash on hand	1,279 40
	$16,777 15

RESOURCES.

Cash on hand and in Bank	$1,279 40
Cash in the hands of Agents	633 41
Assessments in course of collection	1,443 05
Company's Resources, from assessable liability of Policyholders, as per Company's calculation of four (4) Assessments per year	50,352 00
Total Resources	$53,707 86

LIABILITIES.

Death claims due and unpaid	None
Death claims reported, but not due	$836 00
Death claims resisted	None
Due for salaries of Officers	None
Due for commissions of Agents	None
All other debts and claims against the Company	None
Total Liabilities	$836 00

STATE OF MARYLAND, CITY OF BALTIMORE, } ss.

On this sixteenth day of February, A. D., 1883, personally appeared before me ROBERT S. CORSE, President, and ELI W. FREE, Secretary, of THE PEOPLE'S MUTUAL LIVE STOCK INSURANCE COMPANY, OF BALTIMORE CITY, MD., who being severally Sworn according to law, did depose and say that the foregoing Statement of the condition of said Company on the nineteenth day of January last, is a just, full and true Statement of its affairs and condition, to the best of their knowledge and belief.

Sworn and subscribed before me the day and year aforesaid.

JOHN T. MADDUX, J. P.

Mt. Pleasant Poultry Yards,

PLYMOUTH ROCKS EXCLUSIVELY

Eggs, $2 per setting of 15, or two settings for $3.

C. W. HARVEY, Westchester Ave.

Near Ellicott City, Md.

JERSEY RED PIGS.

The most Profitable Breed for the South and West.

"Chicago buyers declare that they are willing to pay ten to fifteen cents per hundred more for Jersey Red Pigs than for any other breed."

—*Chicago "Breeders' Gazette."*

ORDERS BOOKED NOW FOR

SPRING PIGS.

Money need not be sent until pigs are ready for delivery.

WM. L. BRADBURY,

Nason, Orange County, Va.

COTTON SEED —OF— NEW SORTS.

JONES' IMPROVED PROLIFIC—long staple; has produced 2 bales per acre as a common crop; first prize at Atlanta Exposition. Pound per mail, 70 cts.; bushel by freight or express, $5.00.

McKIBBIN HYBRID—short staple; yields of 1,500 and 2,000 lbs. and upwards per acre are reported; very branching; first prize for best 12 plants at Atlanta Exposition. Pound by mail, 70 cts; bushel, $5.00.

HERLONG—short staple; has been thoroughly tested throughout the South; 1¼ bales per acre a common yield. Pound by mail, 45 cts.; bushel, $3.00.

OZIER SILK—long staple; fine silky fibre; very branching; matures early; hardy; has yielded 1,400 lbs. of lint cotton per acre. Pound by mail, 45 cts; bushel, $3.00.

IMPROVED VARIETIES OF COW PEAS and other Southern crops are specialties. We carry the largest stock of **Tested Seed for Market Gardeners** of any Seed House. Send for catalogue.

HIRAM SIBLEY & CO., Seedsmen,

Chicago, Ill., Rochester, N. Y.

Peruvian Guano.

I have secured the only cargo of

HIGH GRADE PERUVIAN GUANO

in the United States direct from PABELLON DE PICA, the richest deposit of Peru, containing 12 per cent. of Ammonia, also a full supply from LOBOS' deposits, containing 5½ to 6 per cent. of Ammonia, which I offer for sale direct from ship or warehouse,

J. Q. A. HOLLOWAY,

107 McElderry's Wharf,

BALTIMORE, MD.

GRAPE VINES

Of following varieties at low prices and guaranteed to be true to name, viz: HARFORD, PERKINS, CONCORD, IVES, CATAWBA, MARTHA, DELAWARE, ELVIRA, GŒTHE, LINDLEY and SALEM.

L. GIDDINGS,

Annapolis, Md.,

Grape Vines for Sale!

I have some finely-rooted CONCORD GRAPE VINES for sale. Price, $4 per hundred; 60 cents per dozen, packed and delivered in Richmond. Also a few NORTON SEEDLING. Price, $10 per hundred; $1.20 per dozen; 10 cents for single one. Address,

DR. THOMAS POLLARD,

619 West Main Street, Richmond, Va.

$72 A week made at home by the industrious. Best business now before the public. Capital not needed. We will start you. Men, women, boys and girls wanted everywhere to work for us. Now is the time. You can work in spare time, or give your whole time to the business. No other business will pay you nearly as well. No one can fail to make enormous pay, by engaging at once. Costly outfit and terms free. Money made fast, easily, and honorably. Address TRUE & Co., Augusta, Me.

GEORGIA MELONS!

CHOICE SEED FROM SELECTED FRUIT.

(RATTLESNAKE, (or STRIPED) SCALY-BARK, (DARK GREEN.))

The Premium Watermelons of the World! Seed from choice crops of Richmond County, and from selected large melons of perfect qualities. Price, ounce 20 cents pound $2.00. Postage 16 cents per lb. Address

Drug and Seed Store. J. H. ALEXANDER, Augusta, Georgia.

SIBLEY'S SEEDS

OF ALL PLANTS, FOR ALL CROPS, FOR ALL CLIMATES.

We are the largest **farmers,** largest **seed growers** and largest **seed dealers** anywhere; hence have greatest facilities for producing **Best Seeds** *All our Seeds are tested,* and only the best sent out. Our *Annual Catalogue and Price List* brings **THE GREATEST SEED STORE IN THE WORLD TO YOUR OWN DOOR.** It includes all the desirable new and standard varieties of Flower, Vegetable, Field and Tree Seeds, and Plants. Sent FREE to any address.

HIRAM SIBLEY & CO. Seedsmen

Rochester, N. Y. and Chicago, Ill.

WM. FRASER,

Landscape Gardener and Florist.

STORE, 277 E. Baltimore Street; GREENHOUSE, Belair Avenue, opposite Schuetzen Park.

County seats laid out, Gardens planted and kept in order by the year. Plans and Estimates furnished on application. Plants Trees and Shrubs at the lowest rates. As a guarantee of good work we refer to our record for the past 10 years as Superintendent of Patterson Park.

ROCHESTER COMMERCIAL TREES NURSERIES

Plants, Trees, Shrubs, Vines, Roses, &c. New Spring **PRICE LIST** with prices per 12 100, 1,000, mailed FREE. Send stamp for descriptive **FRUIT** and illustrated **ORNAMENTAL** catalogues, six cents. Fair prices, prompt attention, and reliable stock. Address

WM. S. LITTLE, Rochester, N. Y.

WESTERN STOCK FARM FOR SALE.

Situated in the heart of the great Western stock region. Valuable improvements; 1,000 acres under fence. Thoroughbred Stock, Stables, Sheds, Corrals, and every convenience for fine stock growing. Handsome Brick Residence. For full particulars apply to GEO. P. BEMIS, Omaha, Neb.

Fruit Trees,

Ornamental Trees

EVERGREENS, &c.

THE undersigned offers an extensive stock of well-grown FRUIT TREES—new Pears, new Peaches, &c. A large stock of

Pear, Apple, Peach, Plum, Cherry, &c.,

Standards and Dwarfs,

Grapevines, Strawberries, Currants,

and other small fruits. **Ornamental Trees** in great variety for parks, lawns, gardens, &c. **Evergreens** of all sizes, of the finest quality. Everything pertaining to the Nursery, Florist and Seed Business, and at the lowest rates.

JOHN SAUL, Washington, D. C.

SEVERN VINEYARD.

PURE WINES FOR FAMILY AND MEDICAL USE.

IVES—*Claret*—per dozen quarts	$5.00
IVES— " — " " pints	3.00
CONCORD—*Sweet*—per dozen quarts	5.00
CONCORD— " — " " pints	3.00
ELVIRA—in pints only—per dozen	4.00

Single casks at above prices; large orders less. Assorted cases packed to suit purchasers.

L. GIDDINGS, Annapolis, Md.

$66 a week in your own town. Terms and $5 outfit free. Address

H. HALLETT & CO., Portland, Maine.

IMPORTED PERCHERON STALLION

SULTAN.

Believed to be the best bred and most superior Stallion in this country. He is seventeen hands and of perfect symmetry. From the age of six months he was awarded first Premiums each year, and for the two consecutive years before exportation, the French Government awarded him one thousand francs each year as the finest horse in his district. SULTAN will stand for a limited number of Mares at my Farm, near Govanstown, Baltimore County, where Mares can be left, if required, at reasonable cost. Terms, $15 for Season. W. T. WALTERS,

Baltimore, Md.

PENNSYLVANIA ROUTE.

FORMED by the Northern Central and Pennsylvania Railroads on the West, Northwest and Southwest to

PITTSBURG, CINCINNATI, LOUISVILLE, INDIANAPOLIS, CHICAGO, ST. LOUIS, and

OTHER PROMINENT POINTS.

Baltimore and Potomac, and Alexandria and Fredericksburg Railways on the South to

WASHINGTON, RICHMOND,

and all points in the

ATLANTIC AND GULF STATES.

The Only All Rail Line with no Omnibus Transfer at Washington.

Northern Central, and Philadelphia and Erie Railways on the North to

HARRISBURG, WILLIAMSPORT, ELMIRA, WATKINS GLENN, ROCHESTER, ERIE, BUFFALO, NIAGARA FALLS.

☞ Baggage called for and checked at hotels and private residences through to destination. Sleeping and Parlor Car accommodations secured.

Through Tickets sold and information given at Company's office,

N. E. Cor. Baltimore and Calvert Sts, At Depot N. C. Railway,

At Union Depot, Charles St., Station, And Pennsylvania Ave. Station,

CHAS. E. PUGH, General Manager. J. R. WOOD, Gen'l Passenger Ag't Penns. & N. C. R. R.

WM. F. & GEO. A. HAYS.

VALLEY STOCK FARMS, Churchville, Md.

BREEDERS OF SHORT HORN CATTLE, BERKSHIRE SWINE and GAME CHICKENS. We have for sale a few Heifers and Heifer Calves, from four to eighteen months old. Also some extra fine young Boars and Sows old enough to breed. Order booked at any time, stock guaranteed as represented, correspondence and personal examination invited.

SAVE MONEY!

Every Farmer should know that 8 cts. per bushel can be saved in raising Corn, 25 cts. in Wheat, and 2 cts. per lb. on Cotton by the use of a

THOMAS SMOOTHING HARROW

Also manufacture the Perfected PULVERIZER, which contains 72 sharp steel blades, covering 10 feet at each sweep. Warranted the most powerful Pulverizer ever invented. For pamphlet containing illustrations of both machines at work, and hundreds of names of those who use and recommend them, address THOMAS HARROW CO. Geneva, N. Y.

BERKSHIRES FOR SALE

At Reasonable Prices.

I BREED only from the most choice stock of the country, in pedigree, form and markings. All stock recorded, and can be seen at any time. Also, Black-Breasted, Red-Breasted, and Blue GAME CHICKENS, or eggs of superior stock for sale. Stock shipped as represented. Correspondence solicited.

THOS. A. HAYS, Churchville, Md.

PLYMOUTH ROCKS!

EGGS, $2 per 15; $3 per 26.

T. W. HOOPER,

LAKE ROLAND, Baltimore Co. Md.

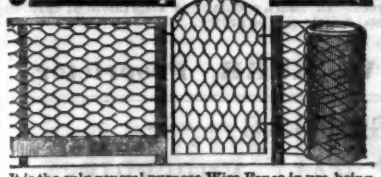
CHEAPEST

PLANTS & SEEDS!

750,000 THRIFTY PLANTS FOR SALE. Large sized, (purchaser's selection.) All labeled. We sell 10 large beautiful **EVER-BLOOMING ROSES** for $1 12 large showy **GERANIUMS** for $1. 12 sweet **HELIOTROPES, $1.** 12 handsome **FUCHSIAS, $1.** 12 ornamental **COLEUS, $1,** and many others. Nearly all of our collection of 500 Superb Varieties are priced at 10 cts. **$200 IN CASH GIVEN AWAY** for **CLUB ORDERS,** besides numerous articles, sure to please the Ladies, such as Shakespeare's Complete Works, Dickens' Complete Works, Macauley's Complete Works, Sewing Machines, an Organ, Ladies' Toilet Cases, and a large number of other valuable articles. **SPECIAL SEED ORDERS! PREMIUMS FREE!** Our Splendidly Illustrated 84 page Catalogue, containing our cheapest collection of Plants and Seeds, and unrivalled premiums, **FREE** to all. Everyone seeing this will find a copy very interesting. **SEND FOR IT.** Mention this Paper.

LEEDS & CO. Cascade Rose Nursery, RICHMOND, Indiana.

SEDGWICK STEEL WIRE FENCE



It is the only general-purpose Wire Fence in use, being a **strong net work without barbs.** It will turn dogs, pigs, sheep and poultry, as well as the most vicious stock, without injury to either fence or stock. It is just the fence for farms, gardens stock ranges, and railroads, and very neat for lawns, parks, school lots and cemeteries. Covered with rust-proof paint (or galvanized) it will last a life time. **It is superior to boards or barbed wire** in every respect. We ask for it a fair trial, knowing it will wear itself into favor. The **Sedgwick Gates,** made of wrought iron pipe and steel wire, **defy all competition** in neatness, strength, and durability. We also make the best and cheapest **all iron automatic or self-opening gate** also **cheapest and neatest all iron fence. Best Wire Stretcher and Post Auger.** For prices and particulars ask hardware dealers, or address, mentioning paper, SEDGWICK BROS., Manf'rs, Richmond, Ind.

PEACH TREES A SPECIALTY,

and other Nursery Stock in Variety.

Being an extensive and experienced fruit-grower, located in the heart of the famous Peach-growing section on the Eastern Shore of Maryland, and having ample facilities for testing the many new varieties introduced, (and find but few of the worthy of adoption) we are now prepared to offer to the spring trade such kinds as have proved most profitable for canning and market purposes.

Write for Catalogue.

N. BARNARD,

Stanley P. O., Kent County, Md.

CLARK'S COVE GUANO CO.

OF NEW BEDFORD, MASS.,

MANUFACTURERS AND COMPOUNDERS OF

Complete Manures,

High Class & of Full Strength, for General & Special Purposes.

Guaranteed standards, full commercial values, and complete mechanical condition. Prompt shipment from Warehouses on Tide Water adjoining B.E. Terminni, convenient for Water Transportation. Reliable firms wanted as dealers, to whom territory can be assigned permanently. Address correspondence to **THOS. M. HART,** Treasurer, New Bedford, Mass., or to **GEORGE W. KIRKE,** GEN'L SALES AGENT,

OFFICE, 48 SOUTH ST. (near Wall St.) NEW YORK.

Send for the "FARMER'S HAND-BOOK ON MANURING AND MEADOW CROPS." Illustrated.

How We Test Seeds.

Probably from the fact that our long experience as Practical Gardeners, made us realize the necessity more strongly than most seed dealers, we very early in our career as seedsmen inaugurated the practice of testing all seeds before selling. From the small tests begun in 1870, this practice has extended and become so systematized that the past season it required the entire use of one of our largest greenhouses for our seed tests during the fall and winter, and afterwards in spring in the open ground we had set out many thousand plants, representing the stock in vegetable seeds alone of over 600 growers. All these tests are carried on under the personal supervision of PETER HENDERSON, and as the author of **"Gardening for Profit"** has had as long and as varied an experience as most men in operations connected with the soil, it will be seen that we are placed in a position to judge, not only as to the germinating properties, but what is of far more importance, the purity of and the kinds of seeds best suited for all gardening purposes. If therefore you can buy seeds as cheaply from us, and we think if you will compare prices you will find that you can—it will certainly be to your interest to do so. Our **Catalogue** for 1883 of **Everything for the Garden** is now ready, and will be mailed free on application.

PETER HENDERSON & CO.,

35 & 37 Cortlandt St., New York.

1883—SPRING—1883.

TREES

Now is the time to prepare your orders for **NEW** and **RARE** Fruit and Ornamental **Shrubs, Evergreens, ROSES, VINES, ETC.** Besides many Desirable Novelties; we offer the largest and most complete general Stock of Fruit and Ornamental Trees in the United States. Abridged Catalogue mailed free. Address **ELLWANGER & BARRY,** Mt. Hope Nurseries. Rochester, N. Y.

Virginia Lands.

Upper James Real Estate Agency,

By WILLIAM HOLMAN,

CARTERSVILLE, Va.,

WHO offers for sale upwards of 12,000 acres of land lying in one of the most desirable regions of Eastern Virginia. Catalogues sent on application.

A. G. MOTT,

AGRICULTURAL IMPLEMENT

And Seed Warehouse,

40 Ensor St., Near Belair Market, Baltimore

SOLE AGENT for the great *BELLE CITY FEED CUTTER,* "Boss of the World" for Fodder, Hay and Straw. Cuts 4 lengths, from ¼ to 2 inches. Will cut one ton in 30 minutes. SEND FOR CIRCULAR.

J. M. LAROQUE'S ANTI BILIOUS BITTERS

For Dyspepsia, Nervousness, Bilious Attacks, Headache, Costiveness, and all Diseases of the Liver and Stomach.

ARE DECIDEDLY THE MOST POTENT REMEDY THAT CAN BE USED.

It is not an intoxicating beverage, and certainly would never be used as a pleasant substitute for alcoholic stimulants, but it is truly a valuable **Family Medicine,** which has been used for many years by large numbers of our citizens with the most unfailing success in all the above complaints. Try it.

25 Cents a Paper, or $1.00 a Bottle.

WM. E. THORNTON, Proprietor,

Baltimore, Maryland.

The Best **BUTTER**

For COLOR and SWEETNESS Use BEAN'S CONCENTRATED **Extract of Annatto.**

Nature's own Color. Brightest and Strongest. Buy of your Merchant, or send 25 cts. in stamps for a sample, coloring 500 lbs. to

BEAN & KABE, Prop., 47 & 49 N. 2d St., PHILAD'A.

THIS NEW

ELASTIC TRUSS

Has a Pad differing from all others, in cup shape, with Self-Adjusting Ball in center, adapts itself to all positions of the body, while the ball in the cup presses back the intestines just as a person would with the finger. With light pressure the Hernia is held securely day and night, and a radical cure certain. It is easy, durable and cheap. Sent by mail. Circulars free.

EGGLESTON TRUSS CO., Chicago, Ill.

G. W. LEHMANN, Ph. D. *Chemist and Metallurgist Baltic Copper Works.*

W. MAGER, *Formerly Chemist of N. C. Fertilizer Control Station*

LEHMANN & MAGER,

CHEMISTS AND ASSAYERS,

57 S. GAY ST., BALTIMORE, MD.

ANALYSES of all descriptions—Manures, Soils, Chemical Fertilizers, Ores of Gold and Silver (by fire process), Copper, Lead, Manganese, etc. Clays, Coal, Limestone and other minerals. Water for steam, manufacturing and household use. Mineral waters and various products of art. Terms moderate.

GYPSUM

THE GREAT FERTILIZER

Thoroughly Seasoned and Finely Ground. The celebrated **CAYUGA LAND PLASTER** having an honorable record of three-fourths of a century. The only Plaster containing **PHOSPHATE OF LIME.** Gives the Plant an early and vigorous start—improves the quality and increases the yield. Lowest freights to all points. Orders (in car-load lots) filled promptly Price **$3.00 per ton,** on board cars or boats.

PAMPHLETS giving full directions for use and testimonials of most eminent Agriculturalist sent **FREE.** Correspondence solicited. Address **CAYUGA PLASTER CO.,** Union Springs, N. Y.

REST not, life is sweeping by, go and dare before you die, something mighty and sublime leave behind to conquer time. $66 a week in your own town. $5 outfit free. No risk. Everything new. Capital not required. We will furnish you everything. Many are making fortunes. Ladies make as much as men, and boys and girls make great pay. Reader, if you want business at which you can make great pay all the time, write for particulars to H. HALLETT & Co., Portland, Me.

THE SOUTH BEND CHILLED IRON PLOW.

The Best and only True Chilled Plow in the Market. Gives Universal Satisfaction wherever it is Used

NO FARMER can afford to buy any other when he can get this Plow at the same price. We have sold it for five years and never had a Plow returned. WE ARE ALSO GENERAL AGENTS FOR THE

Springfield Pitts Thresher and Engine, "Gregg" Reapers and Mowers, "Thomas" Rakes and Tedders, Champion Check Row Corn Planter, Canton Corn Cultivators, "Lansing" Spring Tooth Harrows, New Departure Iron Cultivators, Wheelbarrows of all Kinds at Bottom Prices, and Anything Else Found in a First-Class Implement House.

SEND FOR OUR SPRING CIRCULAR AND PRICE LIST.

J. C. DURBOROW & CO.

53 LIGHT STREET,

Baltimore, Md.

BURNSIDE PARK HERD,

SAM'L M. SHOEMAKER,

BALTIMORE, - MARYLAND

FARM & GARDEN IMPLEMENTS

The Planet Jr. Seed-Drills, Wheel-Hoes and Horse-Hoes are without an equal in the world! We have never before offered them so perfect, or in such variety, nor published so clear and full a Descriptive Catalogue of them. We guarantee it to interest every one who plants seeds or cultivates the soil. It is a beautiful descriptive work, of thirty-two pages, with over Thirty New Engravings, showing the tools at work among Onions, Beans, Celery, &c., and also contains a chapter on the proper Cultivation of Crops. Send your own address, and ten neighbors' most interested in Farming and Gardening, and we will mail it free. S. L. ALLEN & CO., Patentees and Sole Manufacturers of the **PLANET JR. GOODS,** Nos. 127 and 129 Catharine St., Phila., Pa.

DIPHTHERIA

CROUP, ASTHMA, BRONCHITIS.

JOHNSON'S ANODYNE LINIMENT will positively prevent these terrible diseases, and will cure nine cases out of ten. Information that will save many lives, sent free by mail. Don't delay a moment. Prevention is better than cure. I. S. JOHNSON & Co., BOSTON, MASS.

The New GRAPES Prentiss,

Pocklington, Duchess, Lady Washington, Vergennes, Moore's Early, Brighton, Jefferson, etc. Prices reduced. Also other Small Fruits and all older varieties Grapes. LARGEST STOCK IN AMERICA.

Extra quality. Warranted true. Cheap by mail. Low rates to dealers. Illustrated Catalogue free. T. S. HUBBARD, Fredonia, N. Y.

Catalogue and Prices of **PEDIGREE SEEDS** Sent Free to any Address.

D. LANDRETH & SONS Seed Growers, PHILADELPHIA.

FIELD AND GARDEN SEEDS

Our stock of Seeds are new and true to name, embracing all the valuable varieties, and are from the most reliable growers only. Thankful for the commendation and increased patronage which have crowned our efforts to supply the best seed in the market, we will strive to merit confidence.

FERTILIZERS.

GRIFFITH & TURNER'S ANIMAL BONE PHOSPHATE. A high grade Phosphate, a complete fertilizer, always gives good results.

GRIFFITH & TURNER'S ALKALINE PLANT FOOD. Prepared with special adaptation to the growth of Corn, Potatoes, Tobacco and Vegetables requiring Fertilizer rich in Potash.

GRIFFITH & TURNER'S PURE RAW BONE.

HARVESTING MACHINERY.

McCORMICK'S TWINE BINDER.
McCORMICK'S IMPERIAL REAPER.
McCORMICK'S DAISY SINGLE REAPER.
McCORMICK'S IRON MOWER.

HORSE RAKES.

Both Hand and Self-Dump.

THE DOCTOR BAILEY CUTTER

For Hay, Straw and Fodder.

In Sizes Suited for Hand or Power.

Oliver Chilled Plows

run lighter, are more easily adjusted, and do better work than any other plow.

Malta Shovel Plows. Iron Age Cultivators.
Corn Drags. Cahoon Seed Sowers.
Planet Seed Drill and Cultivator.
Hagerstown Grain Drills. Monarch Grain Drills.
Farmer's Friend Grain Drill.
The Scar Horse Rake. The Victor Horse Rake.
The Hagerstown Horse Rake.
Bullard's Hay Tedder. Foust's Hay Loader.
American Hay Elevator.
Double Harpoon Hay Fork. Grain Fans.
Philadelphia Lawn Mowers.
Corn Shellers. Cider Mills.
Farmer's Friend Corn Planters.
Keystone Corn Drills. Hay Presses,
Hay, Straw and Fodder Cutters. Butter Workers.
Stoddard Churns. Davis Swing Churns.
Fountain Pump. Cucumber Pumps.
Maseley's Cabinet Creamery.
Patent Galvanized Steel Fence Wire, cheap, durable and easily put up.

REPAIRING DONE WITH DISPATCH.

SEND FOR CIRCULARS.

GRIFFITH & TURNER.

DEALERS IN

Agricultural Implements, Fertilizers and Seeds,

41 & 43 NORTH PACA STREET,
BALTIMORE, MD.

Strawberry Plants.

TWENTY new varieties of the best Bidwell, Manchester, Mt. Vernon, Big Bob, Kentucky, Crescent, Longfellow, Satin Gloss, Sharpless, Miner's Prolific, Duchess, Wilson, Downing, Monarch, &c. Also CONCORD GRAPES and RASPBERRY PLANTS, Gregg, Cuthbert, Brandywine, &c. Prices low. Send for descriptive catalogue. Also, EGGS of Plymouth Rock Fowls, from first-class stock, $1 50 per thirteen.

R. S. COLE,
Cedar Hill Fruit Farm,
HARMANS, A. A. CO., MD.

WATER-PROOF **BUILDING MANILLA**

This water-proof material, resembling fine leather, is used for roofs, outside walls of buildings, and *inside* in place of plaster. Catalogue and samples free.
(Estab'd in 1866) W. H. FAY & CO. Camden, N. J.

$72 a week. $12 a day at home easily made. Costly outfit free. Address TRUE & CO., Augusta, Maine.

HAZLETT, FOSTER & CO.
Wholesale Dealers in
SEED POTATOES and ONIONS
SPECIALTIES.
OYSTERS, FRUITS AND VEGETABLES,
132 W. Pratt St., - Baltimore, Md.

WANTED TO PURCHASE.
THOROUGHBRED
BLACK SPANISH, WHITE LEGHORN, LIGHT BRAHMA and HOUDAN FOWLS.
Address with prices, O. RICKLEFSEN,
Stevenson, Balto. Co. Md.

Sawing Made Easy

With the Monarch Lightning Saw!

Sent on 30 Days Test Trial.

A boy 16 years old can saw logs fast and easy. MILTS MURRAY, Portage, Mich., writes: "Am much pleased with the MONARCH LIGHTNING SAW. I sawed off a 30-inch log in 2 minutes." For sawing logs into suitable lengths for family stove-wood, and all sorts of log cutting, it is peerless and unrivaled. A great saving of labor and money. Sent on Test Trial. Illustrated Catalogue, Free. AGENTS WANTED. Mention this paper. Address, MONARCH LIGHTNING SAW CO., 163 Randolph Street, Chicago, Ill.

PLYMOUTH ROCKS!

T. W. HOOPER,

LAKE ROLAND, Baltimore Co., Md.

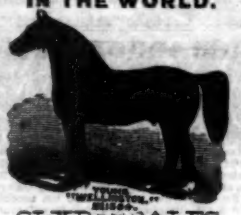
BERKSHIRE PIGS,

PEKIN DUCKS, BRONZE TURKEYS.

ALEX. M. FULFORD,
Bel Air, Md.

10 MOST EXTENSIVE PURE-BRED
LIVE STOCK ESTABLISHMENT
IN THE WORLD.

New Importations Constantly Arriving.



Rare Individual Excellence and Choice Breeding.

CLYDESDALES,
Percheron-Norman's, English Draft Horses, Shetland Ponies,
Trotting-Bred Roadsters,
HOLSTEIN AND DEVON CATTLE.

Our customers have the advantage of our many years experience in breeding and importing, large collections, opportunity of comparing different breeds, low prices because of extent of business and low rates transportation. Catalogues free. Correspondence solicited.

POWELL BROTHERS,
Springboro, Crawford Co., Pa.

HALE BROTHERS, South Glastonbury, Conn., send free Catalogue of best Raspberries, Blackberries, Grapes, Gooseberries, Currants, and CHESTER Strawberry. BEST of all; *Prolific as Crescent, bright color, good quality and firm.* 50 ACRES of Plants, WITH 1,000,000 YOUNG ONES *Finch, Primo, Jersey Queen, Bidwell,* and other best sorts. ANY ONE Should send our *Beautiful Colored Plate,* showing *MANCHESTER IN FULL FRUITING*—Berries ripe and half ripe. WHO WANTS BIG BERRIES AND LOTS OF THEM. HEADQUARTERS for new, early BLACK CAP RASPBERRY. Plants by mail or express to all parts of the United States.

JANNUS & CO.
Patent Lawyers,
WASHINGTON D. C.

Experts in all branches of Patent business, including Interferences and Rejected cases. Electric inventions a specialty. Information and advice sent Free.

PRATT'S ASTRAL OIL

WILL NOT EXPLODE.
Wholesale and Retail.
LAMPS OF EVERY DESCRIPTION.
For Sale by W. & H. SPILCKER,
Agents for Chas. Pratt & Co., New York. 163 Baltimore St.

$5 to $20 per day at home. Samples worth $5 free. Address STINSON & CO., Portland, Maine.

FRANKLIN DAVIS. EWD. H. BISSELL.

BALTIMORE NURSERIES.

FRANKLIN DAVIS & CO.

400 Acres in Nursery Stock. 100 Acres in Orchards.
100 Acres in Small Fruits.

WE offer to our customers an immense stock of APPLES, PEACHES, CHERRIES, APRICOTS, GRAPES, &c., all the standard sorts. Also, the new varieties of FRUITS, ORNAMENTAL TREES, SHRUBS, ROSES, &c. Wholesale and Retail. To dealers we can offer stock on favorable terms, and the best facilities for packing and shipping. Catalogues mailed on application.

FRANKLIN DAVIS & CO.

Office Cor. Baltimore and Paca Sts. (over People's Bank,) BALTIMORE, MD.

EASTERN SHORE NURSERIES,

DENTON, CAROLINE CO., MD.

SPRING OF 1883.

PRICE LIST FOR SPRING OF 1883 IS NOW READY, AND WILL BE MAILED FREE TO ALL APPLICANTS.

A very fine stock of APPLE TREES, of such kinds as are suited to the soil and climate of Maryland and Virginia. Peach Trees, Pear, Cherry, Apricot, Quince and Nectarine Trees. A large and superior lot of Wild Goose and other Plum Trees. An immense stock of Grape-Vines, embracing 40 kinds, at very low prices. Shade and Ornamental Trees. In short, a complete assortment of carefully grown nursery stock, at prices as low as a reliable and good article can be grown.

☞ Send for Price List before purchasing elsewhere.

J. W. KERR, Proprietor.

SPRING 1883.

CLAIRMONT & FURLEY HALL NURSERIES.

FRUITS & ORNAMENTAL TREES, SHRUBS, &C.

200,000 Apple Trees, of all the old and new well-tested varieties, Standard and Dwarf Pears, Cherries, Plums, Peaches, Apricots, Damsons, Evergreens, Shade Trees and Shrubbery of the rarest sorts. Asparagus Roots, Grape Vines, all leading varieties of Strawberries, Raspberries, Blackberries, &c.

To Dealers and those raising Fruit largely for Market, we will deal as liberally as any Nursery in the country. Address

WM. CORSE & SONS,

BOX 248, BALTIMORE P. O.

LUMBER.

THOMAS MATTHEWS & SON,

88 N. High St. and Cor. Canton Ave. and Albemarle St., Baltimore.

White Pine and Yellow Pine LUMBER, for Building. Rough and Dressed Lumber.

HARDWOOD FOR WHEELWRIGHTS AND CABINET-MAKERS.
SHINGLES, LATHS, PALES, Etc., AT LOWEST PRICES.

$1.35 SEEDS FOR 50 CTS

BURPEE'S SEEDS ARE WARRANTED first-class in every respect. Few Equal, None Better. To induce thousands of new customers to give them a fair trial we will send for 50 cts. one packet each of the following new and choicest varieties: The CUBAN QUEEN WATER-MELON, the largest and best. The prize melons grown from our Seed, last season, weighed respectively, 103 lbs., 99¾ lbs. and 89 lbs. $100 IN CASH PRIZES for 1883, for the five largest melons raised from our genuine Seed. Montreal Green Nutmeg Melon, largest on record, one melon weighing 38 lbs. the past season, and of luscious flavor. We offer $50 IN CASH for three largest Montreals grown this season. New No. 3 Cabbage, very early, a sure header of fine quality. Giant White Italian Onion, grown to weigh 2½ to 4 lbs. each, mild and pleasant. We will pay $25 CASH PRIZES for largest of these Onions. BURPEE'S CLIMAX TOMATOES, the best of all Tomatoes, *certainly the climax of perfection.* New Perpetual Lettuce, finest lettuce for family use, as one sowing will do for whole season. Japanese Nest-Egg Gourd, of great value to every poultry-keeper, they make very best of nest-eggs. Egyptian Beet, earliest, improved Hollow Crown Parsnips, best parsnips. Golden Globe Radish, beautiful, perfect shape, quick growth. Perfect Gem Squash, very prolific, fine grained, sweet flesh, wonderful keeper. Spinach, new thick leaved, round. Early Snowball Turnip, very early, both skin and flesh white as snow, most delicate flavor. All above are full, regular size packets, with illustrations and directions for culture, printed on each packet.

A REMARKABLE OFFER! The above 18 packets at usual prices cost $1.85. We will send the entire collection by mail, postpaid, to any address for ONLY 50c. or 5 collections for $2.00, and we will put in each collection, free of charge, a sample packet of BURPEE'S MAMMOTH WHITE SURPRISE CORN, and a sample of the wonderful NEW WELCOME OATS, heaviest and finest Oats ever seen.

FOR $1 we will send above splendid collection of 15 varieties, ALSO one packet each of the following. New Prolific Tree Bean, most prolific known, 1,175 Beans having been raised on one plant. Burpee's Superior Large Late Flat Dutch Cabbage, standard for winter. New Dwarf Round Purple Egg Plant, earliest, smoothest and handsome. Spanish Monstrous Pepper, new, very large, sweet, mild. Burpee's Extra Early Pea, *earliest and the best* extra early. New Lemon Pod Wax Beans, marvellous beauty, fine quality, *immense productiveness.* London Long Green Cucumber, excellent for table or pickling. Round Dark Red Radish, extra early, intense red skin and crisp, brittle flesh. Long White Salsify, a delicious vegetable. New Mayflower Tomato, early, smooth, bright red. The seeds named above amount to $2.55 actual value, but the entire lot will be sent, postpaid, to any address for ONLY $1.00, and in addition we will give a sample packet of Farmer's Favorite Golden Dent Corn and celebrated Golden Grain Wheat, in all 50 packages. A complete Vegetable Garden for One Dollar, and all the finest ORIGINATORS of the system of offering valuable collections of Seeds far below usual cost, and we give to-day the greatest value for money, ever offered. We grow and paper these seeds in immense quantities. We know that all trying our seeds once will be regular customers

$775.00 IN CASH PRIZES for 1883, to growers of best vegetables and farm products from Burpee's Seeds. Competition open to all. See catalogue for particulars. Show this advertisement to your friends and get them to send with you. 3 Complete Dollar Collections mailed for $2.50.

FLOWER SEEDS BURPEE'S GEM COLLECTION of Asters, Balsams, Pansy, Petunia, Phlox, Verbena, New Sunflower, etc. (10 packets), most beautiful varieties, with full directions for culture, for only 25c. This and the One Dollar Vegetable Collection, total 40 packets.—*All the Seeds named in this advertisement* sent to any address for 40 Cts. STAMPS. ORDER NOW, and ask for BURPEE'S FARM ANNUAL for 1883, beautifully illustrated, a valuable book of nearly 100 pages, the only complete Catalogue published, embracing Garden, Field and Flower Seeds, Plants, Bulbs, Small Fruits, Thoroughbred Live Stock, Fancy Poultry, &c. Important Novelties of real Merit.

W. ATLEE BURPEE & CO. PHILADELPHIA, PA. Warehouses, No. 475 and 477 N. 5th St., & 476 and 478 York Ave.

GEORGE PAGE & CO.

No. 5 NORTH SCHROEDER STREET, BALTIMORE, MD.

MANUFACTURERS OF **PATENT PORTABLE STEAM ENGINES.**

The Boilers the Safest and most Economical of Fuel made.

STATIONARY Steam Engines and Boilers, Patent Portable Circular Saw Mills, Sash, Muley and Gang Saw Mills, Flour Mill Machinery, Grist Mills, Shafting, Pulleys, &c., &c. AGRICULTURAL ENGINES A SPECIALTY. Lath, Shingle and Barrel Machinery, Leffel Turbine Water Wheels, Wood Working Machinery, all kinds; Tanite Emery Wheels and Grinders, Circular Saws, Saw Gummers, and Tools and Mill Supplies generally. Agents for *NICOLS, SHEPHARD & CO'S VIBRATOR THRESHING MACHINES.* COMPLETE THRESHING OUTFITS FURNISHED. Send for Descriptive Catalogue and Reduced Price List.

LANDRETHS' PEDIGREE SEEDS

ESTABLISHED NINETY-EIGHT YEARS

SEEDS For the MERCHANT on our New Plan SEEDS
SEEDS For the MARKET GARDENER SEEDS
For the PRIVATE FAMILY
Grown by ourselves on our own Farms

☞ Handsome Illustrated Catalogue and Rural Register FREE TO ALL.

MERCHANTS, SEND US YOUR BUSINESS CARDS FOR TRADE LIST.

DAVID LANDRETH & SONS, SEED GROWERS, PHILADELPHIA

ROSEBANK NURSERIES,

GOVANSTOWN, BALTIMORE COUNTY, MARYLAND.

Ornamental and Fruit Trees, Flowering Shrubs, Herbaceous Plants.

WE invite the attention of the public to our select stock of the following: **STANDARD AND DWARF PEARS**—2, 3 and 4 years. **APPLES**—Standard and Dwarf. **CHERRIES**—Standard and Dwarf. **APRICOTS, CRAB APPLES, MULBERRIES, GRAPEVINES**, of the most popular kinds, together with other small fruits. Our Collections of **ORNAMENTAL TREES AND SHRUBS** are large, and embrace most of the rarest sorts. **ROSES** on their own roots, with the newest of **BEDDING-OUT PLANTS** by the dozen or 1,000, for which we have issued a separate Catalogue.

SPECIAL.—Sixty thousand one and two-year-old OSAGE ORANGE PLANTS, for hedges.

☞ CATALOGUES FORWARDED ON APPLICATION. ORDERS BY MAIL PROMPTLY ATTENDED TO. ALL GOODS DELIVERED IN BALTIMORE FREE OF CHARGE.

W. D. BRACKENRIDGE.

BEAUTIFUL FLOWERS AND EVERYTHING FOR THE GARDEN

500 Acres. 18 Greenhouses. 29th Year.
Beautiful Catalogue of about 100 pages, free.

☞ *Greenhouse Plants, Shrubs, Roses, Bulbs, Climbing Vines*, including 25 kinds of the *New Clematis*, a full assortment of both *Flower and Vegetable SEEDS. Apple, Pear, Plum, Peach, Cherry, Grape*, and all other FRUITS. SIXTY $1 SETS of our choice *all labeled, as follows: 12 Fuchsias, 12 Geraniums*, The famous *Kieffer Hybrid Pear*, $1.50. *LeConte Pear*, $1; *Champion Quince*, 75 cents; *Japanese Dwarf Chestnut*, fruit immensely large, sweet, 50c. and *Russian Mulberry*, hardy as the oak, very productive, 25c. Set of 5, worth $4.10, only $3. 10 *Phloxes*, 12 *Carnations*, 75 *Hardy Catalpa*, 12 *Chrysanthemums*, ☞ 12 BEAUTIFUL Ever-Blooming ROSES, 12 *Tuberoses*, 12 *Gladiolus*, 20 *Verbenas*, 15 *Basket or Bedding Plants*, 30 pk's *Choice Flower Seeds*, 40 *Sweet Chestnuts*, etc., etc., by mail, or 8 by express. $6 FOR ANY SEVEN SETS

☞ Hundreds of other things cheap; many new and rare. Safe arrival guaranteed.

THE STORRS & HARRISON CO. PAINESVILLE, LAKE CO., Ohio

REID'S CREAMERY
ALWAYS MAKES GOOD BUTTER. SIMPLEST AND BEST.

BUTTER WORKER
Most Effective and Convenient, also Power Workers, Butter Printers, Shipping Boxes, etc.
DOC POWERS.
Write for Illustrated Catalogue.
A. H. REID,
26 S. 16th Street, Phila. Pa.

Imperial Wine Vinegar.

NONPAREIL CIDER VINEGAR.

STRICTLY pure and reliable. Many imitations, costing 5 cents a gallon, are sold as Cider Vinegar. To guard against deception, observe that packages bear our brands.

Fresh APOLINARIS WATER.

FREDK. M. BOLLMAN, Importer
68 S GAY STREET.

NEW YORK SEED DRILL.
(MATTHEW'S PATENT.)

Buy the best and only perfect Drill. Send for Circular.

HIGGANUM M'F'G CORPORATION,
HIGGANUM, CONN., U. S. A.

WISE people are always on the lookout for chances to increase their earnings, and in time become wealthy; those who do not improve their opportunities remain in poverty. We offer a great chance to make money. We want many men, women, boys and girls to work for us right in their own localities. Any one can do the work properly from the first start. The business will pay more than ten times ordinary wages. Expensive outfit furnished free. No one who engages fail to make money rapidly. You can devote your whole time to the work, or only your spare moments. Full information and all that is needed sent free. Address STINSON & Co., Portland, Me.

GEORGE O. STEVENS,

WINDOW SASHES, BLINDS & DOORS

49

LIGHT STREET,

BALTIMORE.

KEEPS IN STOCK AND FURNISHES TO ORDER: Window Sashes, Doors, Blinds, Mouldings, Brackets, Hand Railings, Balusters, Newel Posts, Bracket Shelves, Barge Boards, Window Caps, Door Caps, Pews and Church Work, Blinds, Hinges, Builders' Hardware, Wood Mantels, Window Frames, Door Frames, Paints, Oil, Putty, Glass, Lumber, Bricks, Lime, Sash Weights, Sash Cord, Porch Columns, Tree Boxes.
The Best Work at Lowest Prices.

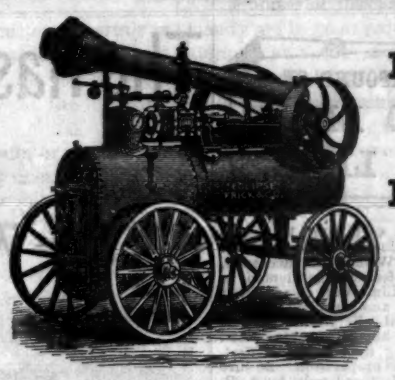
JOSHUA THOMAS,

STEAM.

Agricultural and Mill Machinery

ECLIPSE AGRICULTURAL ENGINE

FIRST PREMIUM WHEREVER EXHIBITED.



Best, Cheapest, and most Economical Engine in the Market.

Buffalo Pitts Thresher and Cleaner,

The old standard, and still ahead of all competitors.

KIRBY AND WHEELER MOWERS AND REAPERS,
OSBORNE SELF-BINDING HARVESTER.
A Full Line of Harvesting Machines, adapted to the wants and taste of Farmers any and everywhere.

Union and Hagerstown Grain and Fertilizer Drills, Circular Saw Mills
Chieftain Horse Rakes, Portable Grist Mills,
Millstones, Smut Machines, Bolting Cloths, Buckeye Force Pump,
Mill Picks, Leather and Gum Belting, Cucumber-Wood Pumps,
The Watt and Ball Plows, &c., &c.

Prices and Descriptive Circulars on application, and correspondence solicited from all wanting anything in my line.

OFFICE AND WAREHOUSE,
No. 53 Light St., Baltimore, Md.

S. HAMILTON CAUGHY. NOAH W. CAUGHY.

NOAH WALKER & CO.

CLOTHING and FURNISHING GOODS

165 and 167 W. Baltimore St.,

Between Calvert and Light Sts., SOUTH SIDE,

Washington Building, Baltimore, Md.

ORDER DEPARTMENT.—Gentlemen's Clothing and Shirts, of any material and style, made to order with prompt and careful attention, and strict reference to the established reputation of the house for *TASTEFUL AND SUBSTANTIAL CLOTHING.* Prices guaranteed to be lower than merchant tailoring establishments generally. Their stock of BOYS' CLOTHING, from three years old up, is unsurpassed. Samples of material, with directions by which any one can measure, and prices, sent by mail when desired.

GEO. F. SLOAN & BROTHER,

LUMBER,

DOORS, SASH, BRICKS, &C.

IN LOTS TO SUIT.

132 LIGHT STREET WHARF,
BALTIMORE.

"High Grade" Ammoniated Super-Phosphate.

"Bos" Ammoniated Super-Phosphate,

"GRAIN GENERATOR."

DISSOLVED S. C. PHOSPHATE,

12 to 15 Per Cent. Available Phosphoric Acid.

DISSOLVED ANIMAL BONE.

AGRICULTURAL CHEMICALS.

We have in stock a full line of the above goods.

WM. DAVISON & CO. 118 W. LOMBARD STREET, BALTIMORE.

SLINGLUFF & CO.

OFFICE, 157 W. Fayette St. } BALTIMORE. { WORKS, Foot Leadenhall St.

Manufacturers and Manipulators of

PHOSPHATES.

We are now offering to the trade the following *WELL-KNOWN BRANDS OF GOODS*, which we guarantee fully up to the standard:

SLINGLUFF'S DISSOLVED GROUND BONE,
Containing 3 per cent. of Ammonia.

SLINGLUFF'S DISSOLVED SOUTH AMERICAN BONE ASH,
Containing 40 to 44 per cent. Soluble Bone Phosphate.

SLINGLUFF'S DISSOLVED SOUTH CAROLINA PHOSPHATE,
Containing 28 to 32 per cent. Soluble Bone Phosphate.

To meet the demand for a High-Grade Fertilizer, we are offering

SLINGLUFF'S NATIVE SUPER-PHOSPHATE,
Prepared entirely from Animal Bone, highly ammoniated, Also,

SLINGLUFF'S No. 1 AMMONIATED SUPER-PHOSPHATE.
This we can confidently recommend as one of the best fertilizers sold in the market at the price.

WILBOR'S COMPOUND OF
PURE COD LIVER OIL AND LIME.

Wilbor's Cod-Liver Oil and Lime.—Persons who have been taking Cod-Liver Oil will be pleased to learn that Dr. Wilbor has succeeded, from directions of several professional gentlemen, in combining the pure Oil and Lime in such a manner that it is pleasant to the taste, and its effects in Lung complaints are truly wonderful. Very many persons whose cases were pronounced hopeless, and who had taken the clear Oil for a long time without effect, have been cured by using this preparation. Be sure and get the genuine. Manufactured only by A. B. WILBOR, Chemist, Boston. Sold by all druggists.

DO NOT BUY JERSEY RED PIGS

UNTIL you have read price list and testimonials of the herd which carried of the Great Sweepstakes Premium at Virginia State Fair, and which is the largest herd South. Send for circulars to

T. LOVELOCK,
Gordonsville, Va.

Will be mailed FREE to all applicants, and to customers of last year without ordering it. It contains about 175 pages, 600 illustrations, prices, accurate descriptions and valuable directions for planting 1500 varieties of Vegetable and Flower Seeds, Plants, Fruit Trees, etc. Invaluable to all, especially to Market Gardeners. Send for it!

D. M. FERRY & CO. DETROIT MICH.

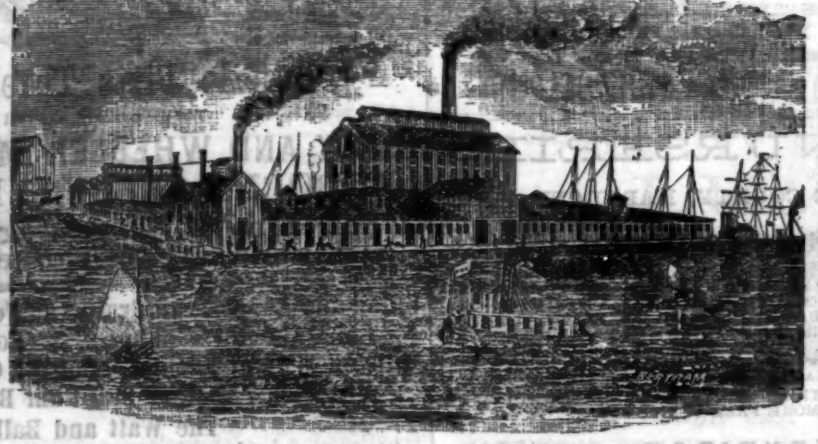
WE WANT 100 more BOOK AGENTS
For Gen. DODGE'S & Gen. SHERMAN'S Bran New Book
THIRTY-THREE YEARS AMONG
OUR WILD INDIANS.

Introduction by *Gen. Sherman.* Superb Illustrations. This great work was subscribed for by Pres't Arthur, Gen. Grant, and *hundreds of eminent men*, and is indorsed as the most Valuable and Thrilling book *ever written.* It Sells *like wildfire*, and is the grandest chance to coin money ever offered to Agents. Send for Circulars, *Extra Terms*, Specimen Plate, etc., *all free* to A. D. WORTHINGTON & CO., Hartford, Conn.

The Rasin Fertilizer Company,

PROPRIETORS OF THE

"SEA-WALL GUANO WORKS."



SITUATED ON THE PATAPSCO RIVER, AT SEAWALL, ANNE ARUNDEL CO.

The most extensive and permanent WORKS in the United States, and the whole under the direct supervision of Mr. R. W. L. RASIN, the General Manager of the Company, whose thorough knowledge and experience is a guarantee of the quality of their FERTILIZERS.

Large Stocks on hand and ready for delivery. Your orders Solicited.

The Rasin Fertilizer Company,

20 & 22 South Street, Baltimore.

WHY PAY

From $60.00 to $75.00 per ton for Peruvian Guano, when you can buy for $38.00 Per Ton, a tried and valuable fertilizer, about equal in analysis to most of the Peruvian Guano sold?

We guarantee the following analysis of

BAUGH'S SPECIAL SUBSTITUTE

—FOR—

PERUVIAN GUANO!

AMMONIA,	5 to 6 PER CENT.
AVAILABLE BONE PHOS.	10 to 12 "
SULPHATE OF POTASH	4 to 5 "

This article has been used for years with excellent results, and we think it will pay to use it liberally, instead of Peruvian Guano.

Price $38 per ton, 2000 lbs.

Delivered to any depot wharf or Wagon yard in Baltimore, in Good Bags of 200 pounds each. Call on or address

BAUGH & SONS,

Sole Manufacturers,

103 *SOUTH STREET*,

BALTIMORE, MD.

WM. STUART SYMINGTON. THOS. A. SYMINGTON.

Symington Bros. & Co.,

Office, N.E. Cor. Holliday St. & Exchange Place. Works, Locust Point, Baltimore

Manufacturers of the

ORIOLE FERTILIZERS,

☞ Each grade of these fertilizers is made under a different and distinct formula, and each contains what is most needed by the particular soil for which it is intended. We guarantee our goods exactly as represented.

SYMINGTON BROS. & CO., Manufacturing Chemists.

R. J. BAKER. ESTABLISHED 1837. R. J. HOLLINGSWORTH.

SULPHATE OF AMMONIA. PURE NITRATE SODA.

R. J. BAKER & CO.

MANUFACTURERS AND DEALERS IN

Pure Ground Bone, Chemicals, Acids, &c.,

For Manufacturing Super-Phosphates

AMMONIATED SUPER-PHOSPHATE FOR ALL CROPS. PURE DISSOLVED RAW BONE. PURE FINE GROUND RAW BONE. STAG SUPER-PHOSPHATE OF LIME FOR TOBACCO.

FACTORY AT LOCUST POINT.

Office, 36 & 38 S. Charles St., Baltimore, Md.

ENTERED AT POSTOFFICE, BALTIMORE, AS SECOND-CLASS MATTER.